Kan jy dit enigsins beter as dit beskryf, die maaginhoud? --- Die kos was gedeeltelik verteer gewees maar nog
nie soveel dat 'n mens nie kan sien wat se soort kos in die
maag was nie en die aartappelskyfies, in my ondervinding vat
hulle 'n bietjie lank om te verteer maar ek kon hulle duidelik
sien dat dit nog aartappelskyfies is wat daar in die maag
aanwesig is.

En niks meer nie? --- Ek het nie aanmerking gemaak oor die ander kos nie, die ander was in 'n verteerde stadium, jy kon nie onderskei presies wat se soort kos die res van die maaginhoud was nie.

Dankie dokter.

JONATHAN GLUCKMAN s.s.

S.P. EXAMINES: Dr. Gluckman, you made a full statement, a sworn statement in connection with this Inquest, is that correct? --- That is so.

Doctor, I will ask you now to please read out Exhibit

.. Statement FF. I will ask Dr. Gluckman now to please read
out the full statement. --- I am a registered medical
practitioner and I am also registered as a specialist pathologic
with the South African Medical and Dental Council. I have
been in practice in Johannesburg as a specialist pathologist
since 1947. I hold the degrees of M.R.C.S. (London), L.R.C.P.
(England), the Diploma of Clinical Pathology of the University
of London, having qualified in London in 1939. In addition
I am a Fellow of the Royal College of Pathologists and I am
an occasional post-graduate lecturer in Pathology at the
University of the Witwatersrand, and for the College of
Medicine of South Africa. I am a former Convener of the

Faculty of Pathology of the College of Medicine of South Africa and I also examine in pathology for post-graduate qualifications conducted by the College of Medicine of South Africa in Pathology, in Surgery and in Radiology.

In the course of my professional work I am constantly involved in the examination and diagnosis inter alia of disorders and diseases of the skin.

On 29th October, 1971, on instructions received from the Attorneys acting for Mr. and Mrs. Timol, I attended a post-mortem examination carried out by Dr. N.J. Schepers on the body of a person which I understood to be that of Ahmed Timol. Some days after the conclusion of the post-mortex examination Dr. Schepers handed to me certain tissues which were embedded in wax blocks prepared by him, taken from certain parts of the body of the deceased for histological examination and which I duly carried out.

Many, if not most, of the injuries were examined microscopically showed no evidence of a cellular inflammatory reaction in relation to the injured area.

I conclude that these injuries

- 1. May have been sustained after the fatal fall.
- 2. (here I will amend what is written) may have been inflicted immediately before the fatal fall and there has not been time (because of the death of the deceased) for a cellular inflammatory reaction to occur.
- 3. may have been sustained in the course of the fatal fall and there has not been time for a cellular reaction to occur.

The word "peri-mortal" is a convenient term to describe injuries of this type.

A peri-mortal injury, e.g. a bruise, may obscure an / injury ...

injury in the same area sustained ante mortem. By the same token an ante mortem injury may be complicated by the super-imposition of a peri-mortal injury, be it a recent abrasion or a mortal bruise.

I now deal with certain of the slides which, in my opinion, as a result of the observations I have made, were sustained ante mortem, giving my reasons in each case. I have confined myself to these slides at the request of the legal advisers of the Timol family.

First, I carried out the microscopic examination alone. Later, however, with the agreement of all concerned, I repeated the examination together with Dr. Schepers utilising a Discussion Microscope which enabled us to examine sections simultaneously and, by means of a built-in pointer. to demonstrate particular features to one another. On this occasion Dr. Schepers and I were able to study the sections which each of us had prepared but had not seen previously. MICROSCOPIC SECTION. At this point, sir, perhaps I should interpolate the note at the end of the affidavit in which I have said that the lettering of the various microscopic sections is derived from the labelling applied to the various injuries by Dr. Scheepers. The numbering of the photographs which I have used, are numbers which I allocated to them for convenience of reference and which are the same as the numbers of the exhibits before the Court.

MICROSCOPIC SECTION "A".

And when proceeding with these, your Worship, I shall add in the points read out by the learned Assessor where it applies, where they are additional. There are no deletions but there are several additions.

Microscopic Section A is shown in photograph 1. Dr.

Schepers described this lesion as a small abrasion covered by
a scab situated over the middle third of the right clavicle.

He removed a portion of this lesion for microscopic examination.

(a) There is a small collection of blood (a microscopic blood blister) just immediately beneath the epidermis.

This haemorrhage is consistent with a peri-mortal haemorrhage, i.e. it may have been sustained shortly before death, at the time of death or shortly after death.

The absence of any inflammatory cellular reaction supports the diagnosis of a peri-mortal injury. It is not known however how long intact red cells can survive in tissues, without provoking inflammatory reaction. There is also the possibility that the section received did not include a cellular reaction more peripherally.

(b) There is also haemorrhage into the deeper layers and there is a focal collection of polymorphonuclear leukocytes and same macrophages.

This cellular reaction indicates the age of the lesion is at least of the order of 12 to 24 hours.

I also examined the Section of this legion prepared by Dr. Schepers. This showed the presence of a well-formed scab on the surface of the skin, with a thin layer of keratin on newly-developed underlying epithelium which was up to 5 to 6 cell layers in thickness.

As this scab was separating from the underlying newlyformed surface of the skin, its age is consistent with a
period of the order of ± 5 to 6 days. If I may amend that
I would say it could be younger because of the smallness
of the lesion but in view of the discussions which have taken

place previously I would adhere to the period 4 to 8. In addition, sir, an adjacent lesion was found at our joint examination described yesterday by the learned assessor. There was a second lesion, separated from the one I have described by normal skin and this was an area of epithelium covering collections of red blood cells. Within the scab itself which I saw in Dr. Schepers' section, there are some necrotic epithelium, polymorphonuclear leukocytes and melanin pigment. I think that completes A.

The next one to which we directed our minds was D which is shown in photograph 2. Dr. Schepers describes multiple small round abrasions on the outer (lateral) aspect of the right iliac bone.

There was haemorrhage in the tissues beneath the surface of the skin and no evidence of any inflammatory cellular reaction.

At one point on the surface of the skin there was a very small area of scab.

On inspection of this lesion prepared and stained by Dr. Schepers, this small area of scab was seen to be part of a slightly larger scab, overlying a thin layer of keratin—and I mean here which was just beginning to form and which was the surface of newly developed epithelium beneath it.

Dr. Schepers concluded that this was a 5 to 6 days old and I said that it was plus or minus 5 to 6 days old and again I amend for the previous reasons to 4 to 8 days.

The additional observations were some necrotic epithelium and melanin in the scab, fibrohasts in the capillary layer and the scab was attenuated laterally for a considerable distance...

MICROSCOPIC SECTION "F". This is shown in photograph 2.

This was described by Dr. Schepers (paragraph 12 in the translation of Annexure 1 to the Post-mortem Report by Dr. Schepers) as follows:-

"On the outer (lateral) aspect of the right elbow and the right forearm near the elbow there is a large bruise as well as a rectangular abrasion".

On microscopic examination there is haemorrhage in the tissues beneath the surface of the skin as well as an inflammatory cellular reaction consisting of disintegrating polymorphs as well as macrophages.

These features make it likely that the lesion is at least 12 to 24 hours.

On the surface of the skin there is a small crust made up of numerous polymorphonuclear leukocytes. This crust has probably been separated from the underlying surface of the skin in the preparation of the section.

No clear layer of keratin has yet been formed beneath the scab. The newly-developed epithelium is still nucleated and about three cell layers deep i.e. the scab is not mature.

The age of this lesion is within the 4 to 8 day period of Robertson, but, if anything, I feel it is more probably towards the earlier period because of the small size of the scab. It must be stressed that I only observed this scab microscopically.

In addition, a necrotic epidermis extended beyond the immediate region of the scab and there was some variation in thickness.

MICROSCOPIC SECTION G. This is shown in photographs 1 and 2. Dr. Schepers describes this site from this specimen, from which this specimen was removed in paragraph 11 of Annexure 1 to

his Post-mortem Report.

It is presumably a representative specimen of a few bruises noted on the front of the right upper arm.

(There are corresponding bruises on the front of the left upper arm, keyed 0.1).

Microscopy: There is haemorrhage into the dermis and the deeper tissues and, in the fat beneath the skin, there is a focus of early fat necrosis.

Iron was shown to be present in the macrophages in the area of fat necrosis, as demonstrated by the Prusian blue (perls) reaction. This cellular reaction indicates that the lesion is probably at least 24 hours old.

As red blood cells are still present, it is likely (but not absolutely certain) that the lesion is less than 5 to 7 days old.

Dr. Schepers (p.57 of his report) concluded (from his section) that he was dealing with a fresh bruise.

Here I would add, sir, that because no scab was present it is more difficult to assess the age of this lesion. Dr. Schepers, agreed, however, that the early fat necrosis and a positive stain for iron were present in the section shown to him. And there are no additional comments from the general meeting.

MICROSCOPIC SECTION H. This is shown in photographs 3 and 7. Photograph 7 shows the incision made for the removal of this specimen. This is described by Dr. Schepers in paragraph 20 of the Translation of Annexure 1 to his Postmortem report as an abrasion covered by a scab on the right shoulder blade.

Microscopy: There is haemorrhage in the upper layers of the dermis as well as vasodilation in this region.

/ There ...

There is also haemorrhage into the subcutaneous tissue and there are a few focal collections of polymorphonuclear leukocytes. Macrophages are also present, perhaps more numerous than the polymorphs. In the section stained by Dr. Schepers, there were also small collections of neutrophils, a few lymphocytes as well as macrophages.

This type of cellular reaction suggests that the age of the lesion is in the order of 24 hours or more.

Dr. Schepers has himself mentioned the presence of a scab in his naked-eye description of this lesion.

Additional observation from the joint meeting, a peri-vascular infiltration was present, there was a small focus of necrotic epidermis and a small area of epithelial hyperplasia.

MICROSCOPIC SECTION K. This is shown in photograph 3 and is described by Dr. Schepers in paragraph 17 of the Translation of Annexure 1 to his Post-mortem Report as follows:

"On the outer lateral aspect of the right thigh there are two large bruises".

These are indicated by the letters E, for the antero-lateral bruise (which is shown in photograph 2) and K, for the postero-lateral bruise (shown in photograph 3). Microscopy: There is haemorrhage throughout the dermis and the subcutaneous tissue. There are also collections of leukocytes consisting of polymorphs and macrophages.

This cellular reaction suggests that that the age of the bruise is of the order of 12 to 24 hours.

Additional observation from our meeting, the presence of freelying fibrin in the tissue and as well as some small fibrin thrombi.

MICROSCOPIC SECTION N. This lesion is shown in photographs 4 and 6. Photograph 6 illustrates the incision made for the removal of this specimen. This is described in paragraph 28 of the Translation of Annexure 1 to the Post-mortem report prepared by Dr. Schepers, as follows:

"Across the left forearm there is an abrasion measuring 2.5 cm x 4 mm, covered by a scab".

There is a scab infiltrated by polymorphs.. I'm sorry,

Microscopy: There is a scab infiltrated by polymorphs on the surface of this lesion. The scab is partly adherent to the underlying newly-formed surface of the skin which shows only the earliest stages of the formation of keratin. The separation of the scab is probably an artefact.

The age of the lesion is probably 4 days or less because of the almost complete lack of keratin.

Dr. Schepers estimated the age of this lesion at 4 to 6 days.

Now reading it together, sir, I want to add from Schedule KK ... "There is haemorrhage into the subcutaneious tissues with some collections of macrophages and disintegrating polymorphs. There is a positive stain for the presence of iron in the macrophages. In the section stained by Dr. Schepers, there was evidence of the presence of capillaries. And then I wish to add, that on the assumption that the capillaries and the fibroblasts are new.. I'm sorry, your Worship, I misread it. I think perhaps one should revert to N and complete it, I have got myself mixed up.

We are now on N. This lesion is shown on photographs 4 and 6. Photograph 6 illustrates the incision made for the removal of this specimen. This is described

in paragraph 28 of the Translation of Annexure 1 to the Post-mortem Report prepared by Dr. Schepers, as follows:

"Across the left forearm there is an abrasion measuring 2.5 cm x 4 mm, covered by a scab".

Microscopy. There is a scab infiltrated by polymorphs on the surface of this lesion. The scab is partly adherent to the underlying newly-formed surface of the skin which shows only the earliest stages of the formation of keratin. The separation of the scab is probably an artefact.

The age of the lesion is probably 4 days or less because of the almost complete lack of keratin.

Dr. Schepers estimated the age of this lesion at 4 to 6 days.

Additional observation, there is a large area of regenerated and regenerating epithelium under the scab. The underlying collagen presents a curious basophilia and the suggestion was that it was crushed and there are fibroblasts and occasional macrophages in the sub-cutis.

Now we may proceed to O.

MICROSCOPIC SECTION O. This is shown in photographs 5 and 6. The region from which this specimen was taken is shown in photographs 5 and 6 and is described by Dr. Schepers in paragraph 27 of the Translation of Annexure 1 to his Post-mortem Report as follows:

"There are also multiple bruises on the left side of the chest".

Dr. Schepers took his specimen as a representative example from the multiple bruises in this region.

Microscopy. There is haemorrhage into the subcutaneous tissue with some collections of macrophages and some disintegrating polymorphs. There is a positive stain for the

presence of iron in the macrophages.

In the section stained by Dr. Schepers there was evidence of the presence of capillaries.

The cellular reaction suggests that the age of the lesion is at least of the order of about 4 days.

In addition, arising out of our joint discussion,
... fatty cists with fat necrosis were agreed upon and there
were numerous fibroblasts and capillaries. On the assumption
that the capillaries and fibroblasts were new then it can be
4 to 8 days, 4 to 5 days but if they are not new, which is
my opinion, then the lesion is younger.

MICROSCOPIC SECTION Q. This has not been marked in the photographs. It is described by Dr. Schepers in paragraph 24 of the Translation of Annexure 1 to his Post-mortem Report as follows:

"On the left side of the neck about 3 cm below the lobe of the ear, there is a small abrasion covered by a scab." Microscopy. The section reveals haemorrhage throughout the specimen with no cellular reaction.

Dr. Schepers apparently saw the same appearance, on which he concluded that the lesion was fresh.

In his description of the neck, however, he refer to the fact that a scab covers this lesion.

Neither of the two microscopic sections therefore includes the scab, which must make the lesion at least several days old.

Additional observation, an imprint abrasion as it were on the surface, I would have preferred to describe this as a local absence of epidermis. Some deeper haemorrhage with no reaction at all and there appear to be some underlying regenerated epithelium.

In 0.1 with which we have not dealt, I have not dealt in this affidavit. We agreed that there was widespread recent haemorrhage without leukocytic reaction and consistent with peri mortal injuries. Before I conclude I would just like to check my observations on 0 to see I have left nothing out. That concludes it.

S.P. Dr. do you adhere to this statement which you made? --- Yes, indeed.

And it was signed and sworn to at Johannesburg on the 2nd day of May, 1972, the deponent having acknowledged that he knows and understands the contents of the foregoing Affidavit and it was signed by one of the attorneys of the Timol family, is that correct? —— No, it was signed by my own attorney, not by the attorneys of the Timol family.

NO FURTHER QUESTIONS.

COURT: Mr. Maisels, I don't know if you wish to put any further questions at this stage?

MR. MAISELS: I think, sir, possibly we will adopt the procedure that was adopted when the police were giving evidence.

COURT: As far as you are concerned the evidence is complete?

MR. MAISELS: At this stage, sir, and then I will re-examine afterwards.

MR. CILLIERS CROSS-EXAMINES: Dr. Gluckman, do you remember that shortly the death of Timol some irresponsible allegations were made by a clergyman called Morton? --- My attention was drawn to a report in the London Press containing ...

COURT: No, I just want, Mr. Cilliers, the statement of the irresponsible allegation first of all, will you just tell us what it was all about.

MR. CILLIERS: Well you saw the report in the Press, you

tell his Worship what those allegations were? —— This was a report of an interview with Reverend Morton which was published in the London Observor, I forget the exact dates, I think it was somewhere towards the end of October. It was only drawn to my attention sometime in December and this report contained, it was a very long thing, it was about a quarter of a page, it contained inter alia the statement that Timol's finger nails had been evulsed, that one of his eyes had been gouged out and that I think one of his testicles had been crushed, as far as I can remember it.

COURT: Did you react on that? --- Yes, I thereupon wrote a letter to the editor of the Observor pointing out that none of these features had been observed by me at the time Iof the examination.

MR. CILLIERS: How long is your letter about? --- It was a very short letter, it was about two sentences.

And have you still got a copy of it? --- I have it, not with me but I do have it in my rooms, it is available.

I have got no right to ask you to but if it is not inconvenient to you would you be so kind as to bring the letter. --- Yes, of course, I can send for it.

The original report...

MR. MAISELS: I can save my friend time, Dr. Gluckman sent me a copy of that letter and if Dr. Gluckman would identify the copy then we can save a lot of travelling. —— You wish me to read it, your Worship.

COURT: If you have identified it, yes, I wish you to read it and hand it in as <u>EXHIBIT MM</u>. -- It is dated the 23rd December, 1971, addressed to the Editor, The Observor, 160 Queen Victoria Street, London.

"Sir,

My attention has been drawn to the article of the Rev. Morton written by Peter Dealley in your issue of November, 28th, 1971. As the independent Pathologist present at the autopsy of the late Mr. Achmed Timol at the request of his family, it is proper for me to inform you that I observed none of the features described by the Rev. Morton from sources that were impeccable. Presumably you will wish to correct that report".

S.P. It will be handed in as Exhibit MM.

MR. CILLIERS: Did you ever see, was this letter published?

--- I did eventually, it was not published in that form, it was paraphrased.

I see. --- I think it was published six or seven weeks later.

The impression that was given by Morton, the report of what the Rev. Morton was supposed to have said is one of torture? --- Undoubtedly.

And that was the impression you wished to correct? --- Undoubtedly.

I notice that apart from correcting the falsehoods which had been reported as coming from Morton, you did not add anything which said that in your opinion there was signs of violence but not of that nature, you added nothing?

—— It was not for me to do anything other than make a factual statement dealing with the allegations made by Mr. Morton and particularly so, when I read the article, your Worship, I felt that it was capable of the interpretation that these reports eminated from myself which is why I felt impelled to take some action in the matter. I don't normally engage in this sort of thing.

You achieved the publication on page 33 of the Observor where the original report had been splashed very prominently? --- Undoubtedly, even though I knew it was in that issue I had difficulty in finding it.

Dr. Gluckman, you know for how long Timol was in the custody of the police, don't you? --- Only very approximately.

Well, what do you know, for how long was he in custody? —— I think he was apprehended on the Saturday evening and he died on, I think it was a Wednesday afternoon.

COURT: He was arrested on Friday night, I don't know if you knew that? —— No, I don't really know. I have tried to divorce myself from the non-medical aspects of this case.

MR. CILLIERS: Dr. Gluckman, you gave a report and limited yourself to those injuries, a detailed discussion of those injuries which were sustained ante mortem? —— Which I believed were sustained ante mortem, yes.

You don't want to be dogmatic about it? --- Well,
I have been pretty dogmatic during the course of my affidavit,

So you think they were ante mortem, those injuries?
--- As I have said.

Now what was the object of giving a detailed description of only the ante mortem injuries? —— As I said at the opening of the affidavit, this was on the advice of the legal advisers involved in this case. The purpose that seemed to be eminently reasonable was to deal with anything which might conceivably not have resulted from the fall.

What was the purpose of that inquiry, were you told, do you know what the object of it was? --- The object was surely to determine whether or not this man sustained injury prior to his death.

Whether or not he had been assaulted by the police, was that not the inquiry? --- I had no such specific instructions given to me.

Didn't you realise that that was the object or think that was the object --- It was not an unreasonable inference.

And you did draw it, I take it? --- Oh yes, I thought it was possible that he may have been assaulted somewhere, at some stage, either before or after he was in custody and in the examination of these injuries we directed our minds to try and determine the age of these injuries.

Well, I will just return to the phrase which you used, you said you thought it possible that he had been assaulted either before or after being taken into custody, is that right? That is what you said, have I paraphrased it correctly? —— I think so, yes. I mean either he received injuries before he went .. that he received injuries was clear to me, either he received them before he went into custody or after he went into custody.

Now wasn't it also part of your task that you were asked to do, to try and determine whether these injuries would be pre-custody injuries or injuries relating to the period after being taken into custody? --- Not at all, sir, I was asked to determine, I was given no instructions of that nature, I was asked to determine my findings on the observations which Dr. Schepers and I made at the time of the post-morten examination. At no stage was I asked specifically to direct my mind as to whether it was before or after he entered custody.

At no stage? -- No, sir.

Dr. Gluckman, you have been in Court several days.

certainly during all the days that the medical evidence has been given? --- Yes. Only on those days.

And you must have realised that it is of importance in this case whether these injuries are for instance four days old or eight days old? —— Indeed.

In other words, an injury which was four days old would be in the custody period and an injury which was eight days old would be outside the period of custody, you must have realised that? --- Well, that is simple arithmetic, yes.

And you have to also know the facts to know that, you have to know how long the custody period was, it is not just simple arithmetic. And were you asked in the course of the discussions which you had with my learned friend, Mr. Maisels and his learned junior. to assist them in trying to establish whether it is less than five days or more than five days, for instance? --- Certainly not, my function here is not to assist them in establishing anything of that nature at all, my function as a pathologist is, in this case is to try and determine the nature of a lesion and nothing else. The fact that we seem both by my learned friend, Dr. Schepers, and myself have repeatedly used the period 4 to 8 in the , days in regard to this, really derives from the fact that both of us have relied on what is the only available paper, to my knowledge, on the assessment of age of scabs and that is how we come to be using this terminology, it derives from the fact that there is a scientific article which both of us have found very useful.

COURT: Are you referring to Dr. Robertson? --- I'm referring to Dr. Robertson and Hodge.

MR. CILLIERS: Now we have come a long way from the question I have asked you, Dr. Gluckman and I think perhaps you mis-

understood or misinterpreted ... when I said have you been asked to try and assist my learned friends in establishing whether the wounds or the lesions are less than five days. I don't believe that this is your function as you replied, whether you are taking a partisan attitude in this, I simply asked you a natural question? —— Then the answer is no.

Have you in the course of these proceedings not been asked to try and give some scientific assistance to placing, whether a lesion should be placed closer to four days than to eight? —— I have been asked in the course of all these discussions to try as accurately as I can to define the age of these lesions.

And have you not known the significance of the period or the difference between 4 and 5 days? --- Of course, it is obvious to anyone who has been in this Court.

You do agree that your original affidavit, Dr. Gluckman, on page 2, the 6th line, is the word "were" in paragraph 2 creates the unfortunate impression that you were saying - you say I conclude that these injuries may have been sustained after the fall, were inflicted immediately before the fatal fall and may have been sustained in the course of the fall. Now you have corrected that, I know you have corrected it. --- When this particular question was put to Dr. Schepers I was present in Court and I immediately agreed with my collague that it should have been may have been.

Why was it placed as were? --- I have no idea,
I was just dictating this into a machine and that is the
word that came out and it is clearly an incorrect usage of
the word.

You said here were instead of may have been, is the one thing which would created the most adverse impression

for the police in this case? --- If Mr. Cilliers says that he says that, that was not the intention behind it.

It was just an unfortunate choice? --- I'm not a legal, as it were, a legal draughtsman, I mean I used the words as they came out and it would be not unreasonable actually if I substituted in one were sustained after the fatal fall, were inflicted immediately after and in three, were sustained in the course of the fall, it would be a perfectly reasonable usage of language so to do.

Yes, except that No. 2, as it originally stood here, gave your opinion in the worst light for the police?

--- As you, your Worship, has pointed out previously in this Court, I am here to assist your Worship and I resent the suggestion that has been made that I'm here specifically to assist my legal colleagues who represent the Timol family. Or to cast dispersions in any particular direction.

Now we come to Dr. Robertson's article. Now Dr. Gluckman, I think you have already said that Robertson's publication is the only record of research which is helpful in this regard that you know of? —— In regard to scabs.

In regard to scabs, yes. —— It is the only one I know about, yes.

And have you done any independent research in regard to establishing the age of lesions and of scabs?

--- No.

You therefore rely entirely on what Dr. Robertson says for your opinion? --- Not at all.

On what do you rely? --- I rely on my experience, knowledge and training as a pathologist. In addition, Robertson and Hodge. I rely upon to assist me in the assessment of my own observations.

I know that you are knowledgeable specialist, Dr. Gluckman, but in regard to establishing the age of a lesion with reference to scabs you have done no research? —— No, Robertson and Hodge have specifically directed their attentions to determining such ages.

Now although it may therefore be easy, much more easy for you to follow what they say because of your specialist knowledge, does your knowledge and experience as a pathologist really add anything to what Robertson has said? —— It enables me, your Worship, to assess very closely the significance of all that they have said.

But the research is theirs, not yours? -- As I said.

Alright. Well, I don't want to spend a great deal of time speculating on what Robertson meant because no doubt Prof. Simson will interpret this article as he reads it and advise his Worship accordingly. But it would be useful to have some elucidation from you on how you read Robertson's work. Would you turn to page 22? --- Yes.

Starting to read from the fourth line, Robertson In says: "Small abrasions, complete epithelial covering of the abrasion has occurred by day 4 or 5", you see that? --- I do.

We don't quite know and I wonder, I don't know if you can assist his Worship by how small or how large an abrasion must be before Robertson would call it a small abrasion, do you have any further elucidation on that term other than the term itself? Do you know what Robertson would include amongst small abrasions and what he would not include amongst small abrasions? —— Well, this is a very difficult question to answer, how small is small, small is small. Robertson has himself avoided the question.

You have no further elucidation then on what he means in regard to the ambit of the word small? --- If you

would give me a moment to consider the point.

Certainly. --- No I can't define the small abrasion more completely.

Well, I couldn't find anything either so we must remain in some degree of uncertainty in regard to borderline cases, of what he would have included amongst small. Do you consider, Dr. Gluckman, all the abrasions dealt with in your affidavit as what you would call small abrasions? --I have never at any stage sort of directed my mind to all abrasions, I have directed my mind to a series of specific abrasions, I would go down to them one by one and examine them, all I have examined are microscopic sections, this is the only thing of which I have absolute detail. I did observe naturally at the necropsy examination, the body of a whole, unfortunately we lack—specific measurements.

Except in one case. — Except in one case, that Dr. Schepers saw fit to measure.

Do you know why a measurement was taken in that case? That is the case of N? --- I don't know why Dr. Schepers measured N and did not measure the others, no.

You don't know why he measured N? Well, Dr.

Schepers has given a macroscopic description and you were present at the post mortem, so if you didn't make independent notes I will understand if you have forgotten but you may be able to agree with his macroscopic descriptions. So shall we refer to Exhibit KK and look at A in which he says "over the middle third of the right clavicle there is a small abrasion covered by a scab". Do you remember it and do you want to look at the photograph? Whether you would, with regard to your usage of the word, describe A as a small abrasion? —— That is photograph No. 1?

/ Yes ...

Yes. --- I think that is a fairly large abrasion. It is a linear mark semi-lineate in shape, a half moon shape, and if one can use the attached label as an indicator it must be the best part of 2 cm in length, I wouldn't call that a small abrasion.

I just want to get your description, I have no quarrel with you. --- You see, we can roughly guess and it is only a rough guess, the sizes of the other abrasions by the size of the label.

COURT: What is 2 cm for my information, I still belong to the old school, in terms of inches, I understand better.

--- It is just under an inch.

MR. CILLIERS: 2.54 cm. is an inch.

COURT: I know all that, but somehow I can't visualize it.

MR. CILLIERS: What about D, Dr. Gluckman, which is
macroscopically described as on the outer lateral aspect of
the right iliac bone there are multiple small round abrasions.

I'm just going through them... --- Your Worship, I think I
must object to this, I don't want to answer this question at
all. I mean we do not have accurate measurements, photographs
can distort, I was unable to make notes—at the time, they
may be large and they may be small, I really wouldn't like to
say, my answer to this I don't know, I can only go by the
photographs.

COURT: You are not in a position to express an opinion?——No, I'm not in a position to, I should have, I realise that I should have measured them specifically and had a scribe to whom to dictate at the time but I didn't and I don't think that I can answer questions based upon what I see on a photograph, I think it would be inaccurate and possibly misleading to the Court.

THE COURT RESUMES.

MR. MAISELS: The question has arisen with regard to evidence that might be available from a newspaper reporter, the newspaper called Rapport.

COURT: Do you want to call him?

MR. MAISELS: No, no, I don't wish to interrupt at all, sir, but the position is that we have approached this gentleman through his editor and asked him whether he was prepared to make a statement which we would hand in to the Court in the ordinary way. He has been advised apparently that he should not or need not make a statement. He is in Court now. I have would merely ask your Worship to .. I should/ask your Worship to issue a subpoena on him ordinarily, pehaps your Worship might consider advising him that he will be required to give evidence so as to obviate the necessity to subpoena. Otherwise, sir, I'm going to ask you to order a subpoena on him.

MR. MAISELS: It is a Mr. Freek Swart.

DIE HOF AAN MNR. SWART: Ek het verneem gedurende die verloop van die verrigtinge dat dit miskien nodig sal word om u te roep as 'n getuie in verband met 'n sekere berig wat gepubliseer is in Rapport op 'n sekere tydstip na die oorlye van Timol. En juis omrede dat dié verslag of die rapport aan jou gemaak is deur generaal Buys, u verstaan?

MNR. SWART: Ja.

DIE HOF: Nou ek vra u nou om getuienis te kom aflê.

Will his evidence be long?

MR. MAISELS: I don't think so, sir."

COURT: Well, in that case I would interrupt the medical evidence.

MR. MAISELS: Well, I have no objection at all, sir, I have

not interviewed him and I would certainly, I didn't want to inconvenience my learned friend or the doctor.

COURT: No statement has been taken but I think we are all aware of the nature of the evidence.

MR. MAISELS: Certainly, sir.

COURT: And I will call him as a witness and I will ask Mr. Beukes then to lead him in examination-in-chief.

MR. MAISELS: Perhaps I can help Mr. Beukes, I have got...

MR. CILLIERS: Your Worship, for re sons, of course I have anticipated that this witness, that my learned friend may ask your Worship to call this witness. If he is called and he does give evidence I will have certain questions to put to this witness and for reasons which will transpire during the course of those questions and which I do not wish to disclose now, I would prefer it if this witness is not called until I have had an opportunity to obtain certain documentation which I do not have with me. I have it available but I do not have it with me therefore if it would suit the convenience of the Court and of my learned friend, I would suggest perhaps 2 o'clock.

DIE HOF: Mnr. Swart, sal jy dan asseblief om 2 uur nm. kom en dan kan u die getuienis aflê en dan sal u verskoon word.

JONATHAN GLUCKMAN (s.u.o.)

MR. CILLIERS (cont.): Dr. Gluckman, before the adjournment we were dealing with the question which is not easy, which is in a sense a symmetric question and we started this inquiry by pointing out that Dr. Robertson's findings in this regard... related to what he referred to as small abrasions so none of us really know exactly where he drew the line between what he would call a small abrasion and not a small

abrasion but I did invite you to traverse as best you can the abrasions that we have in this case and see whether you in the ordinary course of the use of language as you would use it, would call various of these abrasions small. You commented on A and thereafter you said that you find it difficult to rely on memory and the appearance from the photographs and you think that it would be unsafe and perhaps misleading to continue on doing so, to try and estimate the size of the abrasions. Do I understand you correctly, is that a fair summary of what you said ——Yes, I think that is my problem.

Well, I just want to ask you a few things in this regard. At this post-mortem examination, I believe the post mortem took about two hours, is that right, approximately?

--- Yes, I think so.

I understand that a fair amount of the holdup was due to the photographer who had to arrange his camera and get the lighting right and so forth? --- Well, it took place in the normal course of events.

It took longer with a photographer than it would otherwise have done? --- That was not my impression but it could have been, I wouldn't dispute the statement.

You had the opportunity though during that postmortem of studying such lesions as you wished to and asking
Dr. Schepers to take certain cuts, incisions, didn't you? —

I was there as an observer, I was not carrying out the
examination, I was there to be present with, to assist in
the strict sense of the word, to be present and observe all
that went on. This I did.

Is it correct, Dr. Gluckman, that if you asked, is it correct that you did ask Dr. Schepers to make certain

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cuts? --- Yes, I think one or two I did, at the conclusion of the examination.

And did Dr. Schepers oblige whenever you asked him to make a cut and did he make them? --- Of course.

So you had cuts made of what ever you thought will be advisable or as you pleased? —— As I recall it, months have passed, I think there was only one that Dr. Schepers, I think we came back to only one subsequently. Dr. Schepers had taken all the specimens he considered necessary and I had no reason to interfere, nor did I think it was my place to interfere with anything he did.

You say you did come back to one, did you ask him specifically Dr. Schepers please also take a cut of this one?

--- I seem to remember that I did that, yes.

And were you satisfied, Dr. Gluckman, that anything which, as best you could at that stage, appeared that it may be significant or may contribute to the Inquiry which was to follow, that a cut was then taken of everything that you considered necessary or which might be relevant? —— I did not consider it at all in the light of any Inquiry that was to follow, we were there to try and determine the cause of death and obtain such information as we could.

Yes, and did you obtain all the information which you wanted to, you weren't obstructed in any way? --- Not at all, Dr. Schepers could not have been more co-operative.

And is it fair to say then that you are, that you obtained all the information that you required? —— In retrospect I think there may have been things that I should have obtained and should have done which I didn't do.

But I take it particularly those wounds, lesions which you considered may be significant, either Dr. Schepers

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took cuts on his own accord or perhaps in one case you specifically asked him to add another cut? --- I think so, yes.

So as you saw at that stage nothing which at that stage struck you as significant was omitted? —— It is a very difficult question to answer, yes or no, we don't know what is significant in the examination of the post-mortem, we seek everything there is to see and we try and obtain it and one tries not to overlook anything, that is all, one tries and one often fails.

COURT: The whole thing is this, that you were given every opportunity of observing, you were there as an observer and if you had posed any question or directed anyrequest to Dr. Schepers you are satisfied in your own mind that would have been satisfied? —— Undoubtedly.

So in the circumstances you have got all the information which you thought would be necessary as far as your duty was concerned? -- At that time, yes.

MR. CILLIERS: I understand, correct me if it is wrong, Dr. Gluckman, but I understand actually that it was your suggestion that the size of the label could be used as a guide to the extent of the lesion? --- Yes, it was my suggestion. I think it was a poor one.

But I also understand that you are in fact, having made the suggestion are the person who measured the label and found it to be approximately 1 square inch? --- Indeed.

And I take it that the object of pointing out that the size of the label could be used as a guide, a rough guide to what was observed and to measure the label was that by comparison with the label one could form some impression from the photograph of the size of the lesion?

--- Indeed.

Now let us try, as best we can, Dr. Gluckman, and you are of course free to decline if you feel that you cannot do it but let us try to apply this method of determining the size of the abrasions by reference to the labels. let us try and apply the very method that you had in mind that night to apply. --- Well, your Worship, as my learned friend has offered me the option of declining I would like to give my reason for saying that I think it was a poor suggestion because what I had in mind at the time, that as the lesions had not been measured, we might by reference to these labels be able you know to get a good estimate of the size. But when I came to look at the photographs I realised that this was entirely dependent upon the angle of vision. We are all familiar for example, to give you an extreme example, of the photographer who takes somebody sitting up on a chair and looking at his feet and you see feet that size when they are in fact only 10 inches long and it is that kind of thing which makes it anything other, it makes it nothing other than a rough guide. I'm prepared to go along but it is purely a rough guide ...

If I understand your qualification ... (both speaking together). --- I can't qualify it in any particular case, I'm not a physicist who can say because of this optical situation, I just don't know how to do it. But I'm prepared to go along with it but not with the general qualification but that is all.

Within the limits that you oppose, Dr. Gluckman, what would you say about D, what would you say about the size of the small round abrasions?

COURT: D would be photograph No. 2.

MR. CILLIERS: Photograph No. 2. --- Well, it looks at this / angle ...

angle much bigger than 2, it looks pretty well twice, at least twice the size of the label which means that it would be at least, I would say, 5 cm.

I'm not talking about the size of .. --- I'm sorry.

I was looking at E.

I'm talking about the size of the abrasion. --I'm sorry, the abrasion, is that the one that proceeds
posterially from D?

COURT: D is just below the right arm. --- That looks, well it looks...

MR. CILLIERS: There are several small round abrasions? --Well, they look linear to me on this photograph, I would say
they look in the region of, I'd say 2 to 3 inches.

Are you looking at this as one continuous abrasion? --- Well, they look as if, that is all I can see, what I see on the photograph is a sort of line with interruptions, it could be a continuous abrasion or a series of disconnected abrasions.

Because Dr. Schepers' naked eye description is given on your Exhibit KK, it is on the outer lateral aspect of the iliac bone there are multiple small round abrasions. I would have gained from that the impression that these are little or I don't want to qualify the size because that is the question I'm asking but there, they are separate abrasions lying in a line? —— Yes.

I think that Dr. Schepers' description now having been done specifically at that time is probably more reliable than to look at the photograph at this stage? --- And more reliable than my recollection.

Well, if one takes into account how Dr. Schepers described it would you say, call them small abrasions or

not? The individual ones? —— I would say it is a series of small abrasions, they don't look round to me, they look linear but we are dealing with a photograph.

Alright, if one accepts Dr. Schepers' description made at the time then you would call them a series of small abrasions? —— I would accept Dr. Schepers' description, I would qualify it.

Alright, let's look at F. F you will find on photograph 2 as well and the naked eye description is on the outer lateral aspect of the right elbow and the right forearm near the elbow there is a large bruise as well as a rectangular abrasion but there is no angle in the abrasion therefore it is not angular or rectangular but it is linear?

—— I heard the discussion in Court yesterday and I see a rectangular mark but Dr. Schepers has described it as an abrasion and I think ...

As a longish abrasion? —— As a longish abrasion.

COURT: I wonder if I could just put a question at this stage.

Dr. Gluckman I get the impression that you are not at all sure of this part of your evidence, am I correct? You haven't got an idea of the size of the marks? —— Only roughly, sir.

Would you then be prepared to say what Dr. Schepers told us in regard to the size and the extent? --- Yes.

Then that is correct, do you agree with him? --- I would indeed.

MR. CILLIERS: Still, would you describe F as a small abrasion or not? --- If that whole disocloured area is an abrasion, I would say it is a large abrasion.

Well, I don't want you to rely just on the appearance of the photograph, I think that is unsatisfactory?

I'm not talking about the size of the bruise, I'm taking about the size of the abrasion. Are you in a position to say whether it is a small or a large abrasion? —— Utilizing the photograph as my resource or as my information I can't say anything. I can just see a discolouring.

And G, or G are bruises. H, on the right shoulder blade there is an abrasion covered by a scab, photographs 3 and 7? --- Yes.

I think 3 is better because 7 has been cut, look at 3, it is almost out of the photograph, it is on the very edge, would you call that abrasion a small one? —— I would say, my recollection of that lesion of which I have a more clear recollection, is that it was a very large bruise cn which there is an abrasion.

Yes, but the size of the abrasion, can you say anything on that? --- I would say it is a series of small abrasions.

But how small is small? --- I think they are small abrasions, they are certainly taken at this angle and subject to my previous qualification I would say they are in excess of an inch, at least I see three or four discreet ones totalling just over an inch.

Distinct ones... --- Discreet.

So as far as H is concerned, would you like to conclude one way or the other whether it is a small abrasion or a series of small abrations or not a small abrasion? --I think it is a series of small abrasions associated with the bruise.

And then the last abrasion is N, now that we have the measurement, $2\frac{1}{2}$ cm x 4 mm, that is just under an inch but only to the second decimal point under an inch by about a quarter of an inch. Would you call that a small abration?

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That is getting on to being a larger abrasion.

So that you prefer not to call a small abrasion, that is rather a large abrasion. So we have at least in regard to A and N, we have your view, Dr. Gluckman, that these would not, as you would normally use English, in its normal terminology, you would not call them small abrations and the rest may be? Now Dr. Gluckman, I would like you to turn again to page 22 of Dr. Robertson's article. We have as a statement from Dr. Robertson as a result of his research which we all rely on that in small abrasions complete epithelial covering occurs by day 4 or 5 and I think it has been accepted in this Court and I must ask you whether you accept it, that the larger the abrasion the longer it takes to cover? —— Well, that is a common sense observation, that is not a specialist observation as it were, the larger a lesion the longer it would take to cover.

Do you accept that statement of Dr. Robertson that his research has shown that in small abrasions complete epithelial covering of the abrasion has occurred by day 4 or 5? You accept that? --- Well, by this he means that it could have happened anytime between 1 day and 5 days.

Now he does not mention complete epithelial covering before day 4 or 5 anywhere, does he? Does he mention it? I'm not unaware of the words has occurred, I'm just asking you, this is an important observation on Robertson's side, isn't it, to show stages? It is an important thing that he is saying here, isn't it? —— It is an important thing and I think at this stage I would like to make some observations about Robertson's paper because I think they need to be said in our assessment of these papers and I think that this point has been missed

in the discussions that have taken in the Court all the time and that is that we are dealing not with a single situation, we are dealing with a dynamic situation and I think that the operative statement in Robertson's paper and this must colour every interpretation of everything Robertson says in his entire paper, is at the last paragraph of page 18 where he says: "There are 4 recognizable stages in the healing of abrasions: scab formation, epithelial regeneration and covering, subepithelial granulation and epithelial hyperplasia, regression of epithelium and granulation tissue. We use the term stages with qualification. We assume that reparative changes commence almost immediately after injury and they proceed pari passu in epidermis and collagen. Nevertheless, certain histological features are more prominent at different times during healing, and that is why he use the word "stages". Now when he numbers them 1, 2, 3, 4, what he is trying to say is that this is not a sequence of events, he doesn't mean that first the scab forms and then you get epithelial regeneration and then epithelial granulation and regression of epithelium. What he is saying is that an insult or an injury occurs to the tissue and a series of processes start happening and he has picked out at different stages and time those features which are the most prominent and listening to the discussion as I have done yesterday, one has the feeling that the impression exists that this is a sequence of events, it is not a sequence of events, it is a series of dynamic occurrences occurring simultaneously and again to repeat Robertson, he picks out the most prominent feature at a particular moment in time. That is all. And everything that Robertson says in the rest of the paper must be read with that thought in mind.

Other things are happening. When the epithelium starts growing in it doesn't grow in and something else happens below. When the scab forms at the top and white cells get into the scab it doesn't mean to say that that is all that is happening, immediately an impulse or stimulus is given to the adjacent skin to start regenerating and perhaps underneath for activity going on in the vascular system. All these things are happening at once. And therefore you can't pick out any particular thing and say because there is that therefore it belongs to this. And that is why in Robertson you can dearly see at the end indicates or concludes that it is only possible to bring out a broad classification during which you can reach certain reasonable conclusions which is supported by experimental ...

PROF. SIMSON: Could we just perhaps have some clarification on that, Dr. Gluckman. You used the term these are not a sequence of events and later on all these things are happening at once. Is that strictly true? —— Well, the first ...

In other words, let me put it to you more detailed, can keratin form on a defect before the cells have migrated?

--- No, not at all.

In other words, this must happen in sequence, there must be a sequence? --- A sequence but it doesn't mean that when the one ends the other begins, it is a continuing process.

Yes, there is a sequence? --- Yes, it is a continuing process during which all these things ultimately are happening simultaneously except possibly the drying up of the scab.

Do you still say that all these things are happening simultaneously? --- Well, I don't think that no

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vascular changes, no underlying, no vascular changes are taking place while epithelium is growing in, I think these continue.

But all these things are happening at once? ——
No, perhaps the word 'all' is taking it a bit far.

MR. CILLIERS: When he says that according to his research certain features are more prominent at certain times, it means that they are then most easily observable, isn't that so, Dr. Gluckman? —— It depends on the observer, to me it means they are more promiment, they are the prominent features, not any more easily observable, under the microscope very little things are very obvious.

Alright, I'm not going to conduct an argument with you, Dr. Gluckman, but I want, do you agree subject to what you have said that there seems to be a process... which apparently different stages are reached as Prof. Simson has pointed out in succession but one shouldn't draw lines and say now this stage starts, a stage has started perhaps earlier but this is the stage when the features of that stage are prominent? —— Yes.

Subject to that and I understand that, I at least have always understood that, then it is correct that on the fourth line of page 22 is the first time that Robertson in his article mentions complete epithelial covering, that is the first time he mentions it, isn't it? —— Well, I haven't checked through it.

Would you like to check through earlier, I have looked ... --- It means we have got to read four pages, five pages, I'm sure you don't want me to do that.

Well, I have not found him describing the sequence, that he mentions it at an earlier time? --- Sir, I'm sure my / learned . .

learned friend, if he tells me this is the first time that it is mentioned I accept it..

That is the first time the word has been used? --- I mean this phrase.

The phrase has been used but it is the first time in the process, it is at the 4th or 5th day, it is the first time that he mentions this phenomenon of complete epithelial covering... — Well, this is now the first time that he is discussing epithelial regeneration and it would be appropriate for him to do so.

So he mentions it in connection with the day 4 or 5 complete epithelial covering of small abrasions? --- Yes, by then.

Right. Now the point which you have made, that you and Prof. Simson have discussed about progression of stages, of course, complete covering means that it is that the two ingrowing tongues now meet, that is what it means?

—— Yes.

Now the time of meeting of these two tongues is mot a long progressive stage, although this itself may be a progress, this is a much more definable moment although I'm not saying on the 5th or on the 4th day but the moment when the tongue meet is not itself a progress, that is a moment, isn't it? And a very narrow time moment? —— I don't know, it is a bit, obviously they meet like that.

That's right, that is more a moment. So on what Dr. Robertson has found, subject to what you have said, you agree that, do you agree, Dr. Gluckman, that what Dr. Robertson is saying here is that by day 4 or 5 is the first time that you find complete epithelial covering in small abrasions? —— He does not say that, he said, it is not the first time, he has, he says it has occurred by day 4 or 5,

it can occur earlier and in this connection I would draw your Worship's attention to another experimental paper which is the other paper on which we rely, I don't know that reference has been made to it previously and that is Gillman and Penn who did extensive work on a comparable situation. that is on skin grafts where the surface of the skin is removed for grafting and this is known as a test graft, and they have done experimental work on this. this is a test graft, it is strictly comparable to an abrasion that goes down to the capillary layer and they did some most interesting work on this and studying Dr. Koch's affidavit I see that Dr. Koch also has relied extensively on this paper. And Gillman and Penn illustrate the meeting of the two tongues at two to three days after their operation. it is not in any way inconflict with what Robertson and Hodge have said, it is entirely in accordance with it and it can happen earlier and according to Robertson and Hodge it has and it must have happened by day 4 to 5.

Well, it depends of course on the size of the abrasion Gillman and Penn were talking about, doesn't it?

--- Well, as they were doing experimental work on a human volunteer I would suggest they were probably very small.

I don't know ...

Yes, I agree with you.—But again it is an enormous paper, I haven't read it through and it may well be that the dimensions are described, I haven't read it through.

But Dr. Gluckman, I just want to ask you this, you have told us and I don't think anybody will quarrel with it, that the moment of the meeting of the tongue, the complete epithelial covering of the abrasion is an important moment because that is the moment whereafter the forming of

new blood vessels the fibroblastic activity starts, it doesn't start before that so it is a very significant moment to point out.

PROF. SIMSON: Dr. Gluckman, can we perhaps have some clarification on the use of this term moment, do you think this is a moment? --- No, I mean, I don't know, I have no knowledge of how I can measure this time, it is probably..

Dr. Gluckman, would you agree that we are making the error here in thinking in terms of a two dimensional section? —— This is exactly what I was about to say, we look at a two dimensional picture, ignoring completely that this is happening all around the lesion. These are all two dimensional and it is the fact picture. Your Worship, Prof. Simson took the words out of my mouth.

MR. CILLIERS: I understand the new dimension has now been introduced but on the evidence we have before us, on the slides, we only have evidence of a two dimensional section, it may be different elsewhere but we only have that evidence, isn't that so, Dr. Gluckman? —— Well, here we have the pictures, the illustrations in the article but I don't think that any microscopus who is familiar with tissue would for a moment deny the concept that this is happening as part of a process at various points and at different moments of time.

I'm saying in regard to the body of the deceased we only have here evidence on two dimensional basis? --- And of a very narrow section of skin.

I want to avoid using that word at the moment, but it is an important stage that Robertson is mentioning the complete epithelial covering and after that we get certain other sub-epithelial activity, that is in a very important

stage he is mentioning, isn't it? --- Well, again I think we are going to get involved in ... if that may be the stage at which these things are obvious, but the events which lead up to the development of granulation tissue don't start at that moment, they have started happening.

It is not the question, Dr. Gluckman, the question is simply it is an important stage for Robertson in his description of what is happening? --- Oh yes, he uses it as a landmark.

That's right, it is a landmark. And wouldn't you have thought that if Robertson had found that this landmark occurred before day 4 or 5 he would have said so or said it occurs at day 3 or 4? If he says 4 or 5 isn't it presumably the time that he found it and the earliest time?

—— I don't know but as we said earlier I read it differently, it has happened by 4 or 5. In the material at his disposal he was unable to say that it was complete at 3. On the other hand Gillman and Penn say it is complete at 3.

I'm not dealing with Gillman and Penn at the moment, I'm dealing with Robertson? --- But it is relevant, I think they must be taken together.

My learned friend, Mr. Maisels, will have the opportunity to ask you questions and I'm sure he would raise it then. As you have said Robertson, on the face of matters, was unable to say it occurred at 3 and he would have mentioned it as being a landmark at the stage when he found it, that is the probability, isn't it, Dr. Gluckman? Wouldn't the mention have been --- Your Worship, I can't go further than saying that my reading of it is that it is done by day 4 or 5 and I don't know what was in Robertson's mind.

Very well but then we have nothing in this

article which says that it has occurred before day 4 or 5?

--- But your Worship will recall that I said at the outset"

of my evidence that I did not rely only on Robertson's article,
I relied on other things as well.

Yes, insofar as Robertson's article is concerned there is nothing in it which shows that it occurs before day 4 or 5, that is correct, isn't it, Dr. Gluckman? —— I see nothing in his statement which is in conflict with that inference.

Now where we have, if you and Dr. Robertson were using the word 'small' in the same sense within limits then at least in regard to abrasions A and N we would where there is complete epithelial covering have to draw the conclusion that the abrasion is older than 4 or 5 days, if that is what Robertson meant? —— As I recall N ...

N hasn't got complete covering of the tongues yet. --- I thought you said N.

Yes, I said if there is complete covering but I mean I could have excluded the hypothetical question, at least in regard to A, we must then conclude that - if Robertson means it occurs for the first time by day 4 or 5, then we must conclude that A is not a small abrasion but larger than that and A is older than 4 or 5 days? --- Applying Robertson and Hodge to A, if your interpretation is correct and that is that nothing happens, that if day 4 has happened then it must be day 4 old, then certainly, then this would be in that category.

It would be older than 4 or 5 days? --- Yes.

And as far as N is concerned, siff your description is accepted that it is not to be described as a small abrasion in the sense that Robertson and Hodge uses the word then it

simply means the fact that the tongues have not met, it does not mean that this abrasion is not at least 4 or 5 days old? —— I'm not quite clear on that question.

Let me put it this way, in small abrasions ...
--- No, no, on your specific one related to N.

The fact that the tongues have not met in N, which is not a small abrasion, can still mean that N is still four or five days old at least? --- It can still fall into that group, yes.

Now for the rest of Robertson's article you see after the sentence ending "by day 4 or 5" there is the word "thereafter". Now that word has a meaning. "Thereafter the covering epithelium, at first 1 - 2 cells thick, becomes progressively thicker and develops a keratinized surface layer "? --- I see that word, yes.

Do you see anything in this article which indicates that keratin is to be observed before complete epithelial covering? —— I think that would be a the process of keratinization of the epidermis is commencing as the epidermis grows in and thickens and the final evidence of maturity of the skin is presence of keratin.

Do you see anything in Robertson's article which indicates that keratin appears before the complete epithelial covering? --- I don't recall it but I seem to recall in our sections we saw some keratin at the edges before covering, I'm not sure if it wasn't in N. But this doesn't worry me, I won't dispute this, I think at the margins there was a little keratin. I'm not quite sure what that question means, could Mr. Cilliers perhaps clarify it.

Well, I'm asking Dr. Gluckman if keratin, if there is anything in Robertson's article which indicates that the keratin appears over the damaged area, that is over the lesion before complete epithelial covering? ---

PROF. SIMSON: The whole lesion?

MR. CILLIERS: The whole leason. --- I haven't scrutinized Robertson's article with that in mind but I have a mental picture of Section N where it is growing in at the sides and I think keratin was beginning to form at the periphery. That is peripheral to the growing tongue.

I think that is what Prof. Simson wanted to clear up. In other words, you would say that although the tongues may not yet have met, over the periphery the process may be so much further advanced that in the middle where the tongues are that you can even get keratin over the periphery of the lesion although the tongues haven't yet met? — That is where growth commences, at the periphery.

Alright. But over that area where the keratin does appear then, the cell layers would not be one or two layers thick, it would be several layers thick, wouldn't it?

--- One would expect it to be thicker than one or two cell layers thick, yes.

Well, wouldn't one expect it to have a number of layers, eight or ten layers? --- No, there are no absolutes in this, it depends on the site of the body from which it was taken, it depends on the angle at which the skin was taken, I can't go along with absolutes at all but I would expect it to be more than one of the thin sliver, you need several layers to produce keratin.

That's right. Now just before we deal with some sections specifically, I understand youhave had an opportunity of seeing some P.A.S. colouring which Dr. Schepers has done?

—— I had an opportunity of seeing some P.A.S. stains which

I did for Dr. Schepers.

Oh I see, thank you. And this P.A.S. coluring is a colouring which would indicate the presence of the basal membranes amongst other things? --- Amongst other things, yes.

And with the benefit of having done this work, Dr. Gluckman, did you find P.A.S. colouring on, let's start with A? --- I have no report *vailable, I made no notes about the P.A.S. stains except to say that I found nothing in any of the P.A.S. stains which took my assessment of these lesions anywhere.

I would like to know the facts because there may be a different opinion of the same facts. —— I may say that I would not like to go further on this because I made the stains, I examined them quickly and I handed them over to Dr. Schepers for transmission to wherever he wished them to go.

Well, I'd like to go further ... And in that case, sir, I mean if I'm to be examined on this, I must look at them.

Certainly, nobody will expect you to answer questions, I'm sure least of all his Worship and Prof. Simson without a proper opportunity of looking at them. I can tell you that Prof. Koch has looked at them and he certainly is able to draw conclusions from this P.A.S. colouring and from the showing of the basal membrane on these colourings. Would you like to look at those slides before ... —— Yes, indeed.

I take it that you did these colourings, did you only do them at Dr. Schepers' request to hand them to him or did you do them for your own purposes as well? —— Well,

we had our joint meeting, Dr. Schepers, myself, Prof. Koch and Dr. Shapiro, we discussed these things and we thought it might be useful to do some further things and then I asked for further sections, I wanted further sections myself for additional study of particular points, not by the P.A.S. technique and when Dr. Schepers brought these blocks, the wax blocks to my laboratory he indicated that Prof. Koch and he would like some further stain, so I naturally did them and prepared them and I just had a quick run through them with no specific thing in mind and looked to see if there was anything which might be specially significant and I sent them off. I didn't have them in my possession for more than a couple of hours.

So you did have a look at them, a glance at them?

--- Yes, I didn't study them. I was really looking at them
with something entirely different in mind and I was interested
not in the P.A.S. stains but in one of the other stains.

Isn't the P.A.S. stain something that can be very helpful in determining the age of a regenerating epithelium?
--- I don't know.

Don't you know the significance of P.A.S., do you know that it shows a basal membrane? --- Yes, indeed I do, it is one of the uses of it.

Yes, and do you know that the significance, Dr. Gluckman, of the presence of a basal membrane? --- To what significance do you refer?

The significance in assisting to determine the age of the lesion? --- I don't know that it can assist me.

Are you unaware of any literature that says that that when you have a stainable basement membrane, this will help you to assist on determining the age of the lesion?

No, I don't think so, I don't know of any literature that will enable me to age the lesion on the basement ...

I don't know if we have to touch too far but let's try page 23 of Robertson's article. I will read paragraph 4: "Usually at about 12 days, a definite stage of regression of cellular activity occurs in both epidermal and dermal tissue. Thereafter, the epithelium actually becomes atrophic, and reconstitution of normal rete pegs is not seen even after many weeks. The vascularity of the sub-epidermal tissue diminishes, collagen fibres are restored, and the epithelium has a stainable basement membrane."

Now that seems to me to be the first time that Robertson mentions a stage in the recovery of the epithelium where a stainable basement membrane is present and that is at about 12 days. Now that does look as if it can assist, doesn't it, Dr. Gluckman? —— I see nothing in that statement which says that it is not present earlier, I see nothing at all, a basement membrane is a constituent of normal skin and we have got lots of normal skin here, most of it.

But we are dealing with abnormal skin where there has been a damage to the skin and the lesion is deep enough, then of course, if it is abnormal skin and recovering skin and the basement membrane is there, then according to Robertson, well that is usually about 12 days, so with abnormal skin it does assist, doesn't it, Dr. Gluckman? ——

Let me rather say if the basement membrane is damaged with the rest of the skin? --- If it is sheared off yes in the full thickness.

If it is damaged and it has to reconstitute, has to grow again, then this observation of Robertson would seem to indicate that this is usually at about 12 days?

—— I can see nothing here again, we're on the same point

again, nothing here again that it does not appear before 12 days. I don't know but there is nothing here that I can .. I mean I concede immediately that this is a constituent of normal epidermis, I mean that you demonstrate the basement membrane.

Well, you see Robertson doesn't write in the double negative by saying this is not something which is not there earlier, he seems to record observations as he goes along. I understand your problem about stages but this is the first time that Robertson mentions what is apparently another landmark, a stainable basement membrane, that is so? —— In the use of the term landmark you mean it happens at a particular time, I say it happens when the epithelium heals, I don't know when that is.

Well, if it occurred at day 4 or 5, one would have expected Robertson to mention it in paragraph 2 and not in paragraph 4? Now that seems reasonable, does it not, Dr. Gluckman? --- That is not unreasonable.

Now the fact that he mentions it in paragraph 4 without saying expressly that it may occur earlier or it, there is nothing to say that it doesn't occur earlier, in the context it does seem as if Dr. Robertson wanted to say that at day 12 about, usually at about day 12 we get the stainable basement membrane, it does seem that otherwise he would have put it earlier? —— Yes.

Now as you told his Worship you are unaware of what is apparently an assisting feature, if one could have seen them, the stain from the basement membrane, you were unaware of what Robertson had said here? —— Well, in none of the lesions which we have studied did one think other than this is a recent injury or normal skin and I did not

study the P.A.S. sections with this in mind at all and I would like to do so, I would like to have the opportunity of doing so.

Well, I have certainly no objections from our side for doing so, I don't think Prof. Simson has had an opportunity of seeing these stains and I don't know whether he wants to. But Dr. Koch will say that in all the abrasions some more centrally, some more peripherilly under the loose edges of scab he found the P.A.S. stain showing a basement membrane? Where there are thin layers of epithelim he found no basement membrane but where the layers are thick and at the edges there he found a basement membrane, at the edges of the area which is still part of the lesion. Now if Dr. Koch is right when he says that ... --- Well, we have to agree on what is still part of the lesion because in many of the lesions which have been described, on the descriptions, some of the edges in my opinion are normal skin.

I do understand that there seems to be a difference between Dr. Koch and all the others or some of the others ...
--- All the others.

That what Dr. Koch considers to be what he describe as hyperplasia, the other doctors have considered this is in fact normal skin on the outside, it is no more part of the lesion? —— This comes as no surprise to me to find a basement membrane of the normal skin.

No, of course not. But Dr. Koch will explain exactly where he saw it and will indicate under loose pieces of scab which effects to the skin he found this basement membrane being stained, showing up on the stain and on that he bases inter alia, he bases the conclusion that this is part of the lesion where he found the stain. If he is right

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in that, Dr. Gluckman, then on reading Robertson in the way which you have said - it is not an unreasonable way of reading it - it would seem that he would place those abrations where he found it? --- Do you mean a scab regenerating epithelium and the basement membrane all adherent to one another?

You get the scab, you get what Prof. Simson has described as regenerating epithelium and more laterally or different wounds everywhere you get what Prof. Simson has described as regenerated epithelium? --- Yes, I'm sure that Prof. Simson means normal epithelium, when it is regenerated.

I may be wrong but I understood Prof. Simson when he talks of regenerated epithelium, that this is epithelium in an area where there was a lesion, he is not talking about undamaged skin, that wouldn't be regenerated, he just described them as normal skin? --- No, I think we are getting ... to me regenerated epithelium is normal epithelium.

Perhaps Prof. Simson could assist us because it may save time, whether the Prof. in his description meant by regenerated, referred to an area which had been damaged and had been part of a lesion...

PROF. SIMSON: I don't think I should give an opinion on this, this is purely a question of interpretation of the finding. Perhaps I can ask Dr. Gluckman a question instead, as I understand your previous statements, Dr. Gluckman, you are unwilling to accept that where necrotic epithelium is present in the scab there must necessarily have been damage to what underlies that necrotic epithelium? --- Oh no, sir, I'm sorry if I gave that impression. No, if necrotic epithelium is present in the scab then there has been damage to the underlying epithelium.

Dr. Schepers was unable to accept this yesterday but you accept it? -- I do accept it. If there is necrotic epithelium within the scab and the scab is adherent then it must have come from the underlying epithelium.

Following on that, does this necessarily mean that the basement membrane was damaged? --- Not at all, I don't think it does, I think that it depends entirely on the .. (inaudible).

It depends on the depth of the wound? --- The plane of cleavage.

Perhaps we could also to see whether Prof. Koch in his evidence is going to say anything of value, turn to page 21 of Robertson's article. He says this, I will just start from the middle of the sentence, the first sentence on page 21, "At 12 hours this zone is fairly clearly demarcated and the abrasions consist of 3 layers: The surface zone of fibrin and red cells (or crushed epithelium in the case of imprint abrasions), ii. A deeper zone of infiltrating polymorphs, many necrotic with pyknotic nuclei; iii. The deepest layer of damaged, abnormally staining collagen of the zona reticularis".

Now that is an abnormally staining deeper layer, that would include the basal membrane? --- Once the zona reticularis is involved then the basement membrane would have had to go with it.

Now in the scabs just as a general statement, you could deal with the separate if you want to, have you found in some of these abrasions at least a full thickness epithelium, including the basal layer? —— Yes.

That means that the basal membrane must have been damaged in those cases? Do you want to tell us where you

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found a full thickness epithelium? --- I found at one tiny edge a collection in A, a bit of full thickness. In D, do you wish me to do these, I have noted it here. In D, at one small point only there is a full thickness. N undoubtedly is a full thickness all the way.

Now there is only F and H? --- I didn't have a scab on that, on H.

And F? --- F there is a scab which overlay completely normal skin and I had my doubts about whether it was attached there.

You don't know whether that, well if it does not, if it is not attached to that area then of course it doesn't assist. In H, although you didn't have a scab, you saw Dr. Schepers' cut, didn't you, Dr. Gluckman? —— In H I had a small focus of possibly damaged surface epidermis at one point only, I certainly did not see a scab, anything that I would call a scab in the usage of the word, they use this word scab ... a small focus of damaged cells I would say, possibly just folded cells, I am in grave doubt about the lesion on H.

Well, in H Prof. Simson's record that he read out and to what Mr. Maisels agreed included this sentence, "a small area of necrotic epithelium on the edge next to largely reconstituted epithelium." Now I understand that necrotic epithelium is the proper term for a scab? --- Oh no.

Isn't it? --- No.

I thought that had been cleared up but then I'm mistaken. I thought Prof. Simson took up the description "roof" as a necrotic epithelium.

PROF. SIMSON: Not in that context, we were referring to the necrotic epithelium which may form part of the scab.

MR. CILLIERS: So let us deal with the three, we have three.

In three cases then, at least, A,D, and N we have on your observations also a scab and this scab is of full thickness epithelium? —— No, I did not say that, I said in A, I said only at one edge was I able to demonstrate my criterion for full thickness and that is the existence of basal cells...

I didn't suggest that the whole scab in either A or D was of full thickness epithelium but both in A and D there were little parts of this scab which did have a full thickness epithelium? --- Sure.

And in N apparently ... --- N the whole scab.

Now if one then, let us then take N as an example, if N does show on a P.A.S. colouring a staining of this basal membrane, that means that the basal membrane has become reconstituted, doesn't it? --- You mean in the underlying skin?

Yes, under the ... under the scab, if you do a P.A.S. stain on N? --- Well, if we accept that proposition in relation to N, then that is a direct contradiction of the passage to which you drew my attention where it has to happen at 12 days.

Well, that may mean that N is 12 days old? --- But we have other evidence on which we disagree, we have discussed that already.

Well, that is the question, that really makes the question. If one looks at that criterion that on a P.A.S. colouring we get a stainable basement membrane under the scab which was full thickness epithelium in N, then on what Robertson says on page 23, N should be about 12 days old?

—— This underlines the very problem, he may say that in respect of a basement membrane on that criterion on page 23 but on page 22, the passage to which my learned friend drew

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my attention, he says the tongues have met by day 4 to 5 and here we are all ad idem they have not met.

But it is obvious, the explanation to reconcile these two are to me, as a layman, obvious, I may be wrong, and that is that N is not a small abrasion within the meaning of Robertson. Robertson is talking about small abrasions being 4 to 5 days but if we get the only way to apply everything that Robertson says, is to say because of the stainable basement membrane under the scab was full thickness epithelium, that scab is 12 days old and if the tongues haven't met, this is not a small abrasion as Robertson describes it. Now what is wrong with that? --- I think the first thing is to recall that this is an abrasion which is, as we see it under the microscope, not more than a couple of millimetres in length, say 4 mm as I try and get a mental image of the microscopic section, and I would not call 4 mm a large abrasion for the purposes which we have under discussion, that is to say for epithelium tongues to come in from each side. Is this the abrasion which Dr. Schepers described... ---

Yes, $2\frac{1}{2}$ cm by 4 mm. --- Well, that's fine, that fits my image, my mental picture of the slide. You see, 4 mm is, for the purposes of ingrowth, is a very small abrasion, I regard it, it is a very small abrasion indeed. All that the epithelium has got to cover, assuming that it is travelling at an equal rate from each side is 2 mm from here and 2 mm from this side. Frankly if I were asked this question not knowing about Robertson's paper, I would have said it would be closed in two days ...

Well, I have difficulty with that statement because, Dr. Gluckman, when we started going through the / abrasions ...

abrasions I quoted from page 22 and it made quite clear what the context was in which I'm asking you to say whether this is a small or large abrasion as Robertson uses it and you then said when we came to N this is no longer a small abrasion, I can't class it there anymore, this is not a small abrasion. Now when I have put to you that it would be consistent with everything that Robertson says, that this abrasion is 12 days old, now you describe it as a very small abrasion? —— No.

Why the conflict in your evidence? --- Very simple, when I was asked to comment on the thickness I was not asked to comment on the length and on the breadth, I regard an abrasion of 3 inches long as a long abrasion but if it were only a millimetre in width, I'd say it is a long abrasion in one axis and a very small abrasion the other way and if we accept - and we are back to the question of dimensional approaches, if we accept it is coming in from all sides simultaneously, the narrower the abrasion the quicker will it be covered and I regard 4 mm and on this one abrasion we have the advantage of a measurement, I would regard 4 mm as a very small abrasion.

Well, I also have difficulty with that statement, Dr. Gluckman, assist me if you can, my difficulty is this. There is no doubt that with a long scab like this, isn't the cut made across the length? --- Yes.

Right, and it was clear that when we discussed the question of the size of the scab we were dealing with the question of the ingrowing epithelium, the four or five days in small abrasions, I made that context clear, so you knew that you were cutting it from across, the ingrowing tongues, weren't you referring to the questions of the

breadth at that stage? --- Not at all, I was referring to the picture and I qualified the inadequacy of the method of approach.

Well, let me then ask you something else and that is that the scab which is there is all that we still see of the scab but hasn't the rest of this lesion healed and of the areas which are, where the epithelium is fairly normal but where there is no more scab? --- We are talking about N?

We are talking about N. --- Well, all I can say is that if there is a fairly normal epithelium, there is normal epithelium then I can't talk about a scab that isn't there.

I'm sorry, I didn't get that answer, just repeat it? --- You said if there was normal epithelium adjacent to it then the scab is gone, what would I have to say or something like that. I can't talk about, all I can say is normal epithelium, I can't take the matter any further.

No, what I'm suggesting Dr. Gluckman, is although the fronts may not have met, although you say the scab is narrow, 4 millimetres, I'm suggesting that the scab was much wider and that is all that remains of an epithelium that is regenerated in an area where there was a lesion and that the fact that the tongues haven't met doesn't mean they started 4 mm from each other, I'm suggesting they started much wider?—— I think that is pure speculation. I'm not prepared to speculate, if I have speculated previously on this point I was wrong.

Well, Prof. Simson read out N as follows: A very large abrasion, a very large area of regenerated and regenerating epithelium. A very large area of regenerated

and regenerating epithelium.

PROF. SIMSON: I think in that context, your Worship, one should pay no attention to the size of a lesion where it is being used in argument. I suggest that that be ignored for the purposes of the record.

MR. CILLIERS: I don't quite understand that, I don't want to waste time if the learned Assessor says that it is a waste of time...

PROF. SIMSON: I'm not saying that it is a waste of time, if I'm saying that/it is a question of argument on the interpretation of the size of an abrasion, then my opinion must not be taken into account.

MR. CILLIERS: Oh, I see. Well, do you, Prof. Koch will say that the abrasion was wider than the remaining width of the scab shown on the slide? In other words, it didn't have 4 mm to travel, these two tongues to meet each other, it was much wider than that? And he bases this on the fact that the epithelium is not, is as he describes it still hyperplastic? —— Hyper or hypo?

Reasonably normal, hyperplastic or reasonably normal but not quite normal. You can see, according to Dr. Koch, that this area of epithelium had been damaged? Do you agree with that? --- I'm considering the question. I don't want to give you an answer based upon a misunderstanding of your question. Dr. Koch will say that, you say that Dr. Koch will say or says that at the edges there is regenerated epithelium, I want to know what his reasons are for not saying it is completely normal epithelium, he may be applying criteria which I don't accept.

He describes the epithelium therein a word which I understand is not wholly acceptable in all quarters but

appears in literature as hyperplastic? --- I saw no hyperplastic tissue in this section.

So do you say that that lesion was not wider than 4 mm or that you don't know whether it was wider? ——
I cannot give an opinion on a lesion that isn't there, I can only look down a microscope and say there is a lesion, adjacent to it I have normal skin.

Now do you not know whether that normal skin was subject, was also the subject of a lesion or do you say that it was never a subject? --- Sometimes one can say that this was subject of a lesion, that is has been the subject of a lesion, sometimes in some circumstances, yes, as for example in A. There is an old lesion, an obvious old lesion in A but I saw no such lesion in N.

Are there small pieces of scab over this adjacent epithelium which you have described as normal epithelium?

--- Are you talking about N. I have a note here saying that there is a little necrotic epithelium adjacent ... (not speaking into microphone).

It may be attached or it may have travelled there from elsewhere? --- These are possibilities, yes.

Well let's deal with them after having had the benefit of your views on them, general questions. Let's deal with this specific sections. I would just like to read out what Prof. Simson read out and I read it out for the very reason that I understand you agreed fully with what Prof. Simson has read out? —— Yes, Prof. Simson expressed the opinion of all of us except Dr. Koch at the meeting.

Yes, Dr. Koch also agreed with what he said, he the wishes to add a little bit. --- No, I was saying at /meeting.

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Prof. Simson, as I have it said "a small collection of blood underneath epithelium, haemorrhage in deeper layers of the dermis and sub-cutis, collection of neutrophils and macrophages. In the scab necrotic epithelium .. melanin, I have obs., it may be observed or observable. Regeneration of epithelium underlying this with formation of keratin.

Necrotic epithelium extended over regenerated epithelium, in the dermis dilated capillaries are present. I saw a second lesion, separate from the first but normal epithelium between the two lesions. The second lesion is completely, the second lesion has completely regenerated epithelium into the dermis, dilated capillaries and occasional fibroblasts. Is that acceptable.

Now about these two lesions, we have had a view from Dr. Schepers and certain discussions from Prof. Simson, that although they now appear as two lesions, they may well be one, the result of one force and may well have been one lesion originally, what may have been, I think Dr. Schepers said 50-50, what do you say to that, Dr. Gluckman? --- Well, so little do I adhere to that view that when I saw the lesion, that when I saw that area of skin at my initial examination, I think Dr. Shapiro and I were together when we were studying this, so little did I think of it that I ignored it and frankly had forgotten about it until at the joint meeting Prof. Simson drew our attention to it very correctly and as far as I was concerned it was a piece of regenerated epithelium, it was a piece of epithelium which may or may not have been damaged some time before. I had no thought in my mind connecting the two lesions.

Well, what do you think now after Prof. Simson has drawn your attention to it, specifically to the second

lesion? --- I think it is a piece of skin overlying some blood, that is all.

Do you think the two lesions could have been one?

--- I have no basis upon which to speculate on that point.

Well, is there any evidence against it? --Perfectly normal skin separates them, there is no reaction
in relation to it of any kind, there is no damage in the
skin, it is just a flat piece of epithelium. I mean if someone came to me and said I can prove that this happened at
the same time I couldn't really argue with him but there is
no basis upon which I can possibly guess ...

You say it is improbable? --- Well, the point wouldn't present itself to my mind.

On your report, on reading your affidavit, Dr. Gluckman, I don't see a mention in there of fibroblasts but now the fibroblasts should have come under the second lesion, is that the explanation why you didn't mention it?

--- No, I don't think that is the explanation, I accept that there were fibroblasts there but fibroblasts have never specially intruded themselves on my consciences unless they are in excessive quantities. The presence of fibroblasts, generally speaking, I don't specially note unless there is some reason for noting, they are after all quite...

If you have an injury you of course expect some fibroblastic activity at a certain stage, don't you? --Well, we must define fibroblastic activity, one generally accepts the fact that fairly late in an injury more fibroblasts make their appearance but this is never by themselves, this is always in relation to the development of granulation tissue. Fibroblasts themselves to me mean one thing only, that there are fibroblasts.

I just want to ask one more question, do you think that Prof. Simson specially mentioned it in his summary because it was of no significance? —— Well, it was our understanding at our meeting that we would not discuss the significance of any of these observations.

COURT ADJOURNS.

DIE HOF HERVAT OM 2 NM.

FREDERIK JOHANNES SWART b.v.

S.A. VERHOOR: Mnr. Swart, u is 'n verslaggewer verbonde aan Rapport koerant in Johannesburg, is dit korrek?--- Dit is korrek.

Mnr. Swart, ek gaan aan u toon 'n koerant uitknipsel Bewysstuk T, wat hier ingehandig is al vroeër in hierdie ondersoek. Het u hierdie berig geskrywe in Rapport gedateer 31 Oktober 1971? --- Ja, ek het die berig geskryf.

Die berig soos u hom geskryf het is net so vervat in die koerant ?--- Ja, dit is net so.

<u>DIE HOF:</u> Is die berig soos verskyn in die koerant die berig soos u dit geskryf het? --- Kan ek net 'n geleentheid kry om dit deur te lees?

Ja. --- Ek het die berig geskryf soos hy hier verskyn behalwe vir die laaste vier paragrawe, dit is kommentaar van die sub-hoof "Dure plig

Behalwe vir die laaste 4 paragrawe? --- Ja.

S.A. Onder die opskrif "Die dure plig? --- Ja.

DIE HOF: Die opskrif is wat? --- Die opskrif is "Dure plig".

Van "Dure plig" na ondertoe, dit is nie joune nie?
--- Ja, dit het ek nie geskryf nie.

S.A. Mnr. Swart. ek wil u getuienis in hierdie verband beperk slegs vanaf die swart gedrukte letters 'In Pretoria het generaal Stoffel Buys gister by die Speurderhoofkwartier die volgende gesê, kan u vir ons daardie hardop uitlees asse-

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