DERMATOLOGISTS AND RADIOTHERAPY*

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1. Dr. Loewenthal's paper is but a continuation of the discussion in the *Journal* during 1950-51 on a portion of Dr. Charlton's paper[2] which dealt not only with skin diseases, but also with radiation therapy in benign conditions generally.

2. Dr. Loewenthal did not give the references to those who took part in the discussion or even to Dr. Charlton's paper but merely referred to 'one radiologist' and 'another radiologist' and 'a dermatologist,' so that radiologists and dermatologists who were present at the meeting in Durban, and many of your readers who wished to do so, could not check Dr. Loewenthal's version of what took place.

3. Why Dr. Loewenthal had to brood for 8 years on this subject before joining the discussion it is difficult to understand. When he had the opportunity 7 years ago to discuss the matter, his only contribution was a few lines of verse, which contained neither medicine nor dermatology nor radiology nor poetry.

The arguments and the terminology used by Dr. Loewenthal are so strikingly similar to the letters by Sulzburger[3] and others in their controversy with Professor Chamberlain, which Dr. Loewenthal calls the 'first attack on dermatologists,' that one cannot help feeling that it was the publication of these letters

*Submitted as a comment on Dr. Loewenthal's Congress paper[1] which was published under the above title in the *Journal* of 28 December, 1957. A summary of longer original article.

which supplied Dr. Loewenthal at last with the ammunition and material for his paper in 1957.

Dr. Loewenthal ignores, for instance, the fact that Dr. Charlton in the techniques he described treated many skin conditions at 60 KV and there was very good reason for his techniques when he used higher KV; but Dr. Loewenthal says that the apparatus of radiologists is unsuitable for dermatological conditions. The so-called superficial skin units which most dermatologists possess go up to 120 KV; only a few have the Dermopan, which goes up to 60 KV. So a dermatologist who has a unit going up to 120 KV can legitimately, according to Dr. Loewenthal, use that unit at 60 KV but, if by any chance the radiologist has a unit which goes up to 200 KV and can still be used at 60 KV, this unit is unsuitable for dermatological purposes. As a matter of fact, most radiologists have special superficial units of the 45 to 60 KV type, and it was Cipollaro himself who in answer to a question by the late William Harris stated that dermatologists could not have 45 to 60 KV units because they had to have units which could cover larger fields and, therefore, used the higher kilovoltage units.

4. In the present article Dr. Loewenthal does not use poetry, but has changed to fanciful prose with references to bull-fights and matadors with which he chooses to describe 'my own contributions to the discussion some 8 years ago,'[4, 5] but again without giving the reference.

5. If Dr. Loewenthal had given the references, one would have been able to see that after appealing for the 'rules of polite debate' he promptly misquotes Dr. Charlton. Dr. Charlton had stated that the X-rays do not kill the spores of fungi. Dr. Loewenthal in his quotation leaves out the 'not' and then on this misquotation proceeds to build up what he considers a case against the treatment by radiologists of dermatological conditions. Even if Dr. Charlton were wrong, does the fact that one radiologist makes a mistake prove anything?

6. Dr. Loewenthal's attack on Dr. Charlton and his misquotations without giving the references will be deplored not only by radiologists but, I am convinced, by all dermatologists. Dr. Charlton retired some years ago after holding the senior radiological appointment at the Johannesburg General Hospital for 16 years and after 25 years as a senior practising radiologist. It is doubtful whether Dr. Charlton, who is no longer in Johannesburg, will ever see Dr. Loewenthal's paper and, even if he did, it is unlikely that he would be bothered to reply to an attack made on an unnamed radiologist.

7. Dr. Loewenthal refers to two attacks made on dermatologists by radiologists. In what he calls the first attack (here he supplies the reference) he gives his version of the controversy between Professor Chamberlain and the American dermatologists. Professor Chamberlain, a recognized authority throughout the world, gave a press interview in 1956 after the Geneva Conference on Radiation of 1955. He made two points. One was that radiation was used far too frequently in benign dermatological conditions and that the dermatologists were the main culprits (up to 99%). His second point was that when radiotherapy had to be given it should be given by radiologists.

Seven senior dermatologists in the US wrote letters to the *Archives of Dermatology* protesting at Dr. Chamberlain's making his views public and, although they resented Dr. Chamberlain's view that radiotherapy should be given by radiotherapists, they resented still more the fact that Dr. Chamberlain said that X-ray therapy was being used far too frequently for benign conditions and that the dermatologists were the main culprits.

The arguments put forward by the dermatologists are embodied in Dr. Loewenthal's paper. They came out with the usual statement (1) that radiotherapists have not got suitable machines for treating skin conditions, (2) that radiotherapists cannot know anything about skin conditions, and (3) that because dermatologists in the US to obtain the Diploma of the American Board of Dermatologists, have to show that they have had 5 years' experience in radiotherapy, the dermatologists are much better equipped to treat patients than radiologists are. Some of the writers of these letters are the very people who warned the American dermatologists not to undertake X-ray therapy unless they were adequately trained. It follows, therefore, that there must be many dermatologists who have not had the 5 years' radiotherapy training mentioned in some of the letters.

Dr. Loewenthal's version of the controversy leaves out completely the point made by Professor Chamberlain that X-ray therapy is used too frequently by dermatologists, physicians and radiologists in benign skin conditions, and that dermatologists were the worst offenders.

One would think from Dr. Loewenthal's version that Professor Chamberlain, whom he belittles with various sneers and to whose status he does not do justice, was completely crushed, but no impartial observer would accept this version.

8. In his version of the second attack, although he refers to an article published in 1949 and the subsequent discussion by radiologists and dermatologists in 1950 and 1951, he does not give the references. The article was written by Dr. Charlton[2] and Dr. Loewenthal merely refers to him as 'a radiologist,' misquotes him, and then goes on to build up a case against radiologists treating skin conditions. He refers to the discussion on this paper by 'another radiologist,' who happens to be myself. I published two letters[4, 5] on the subject, in which I gave a list of some of the hospitals in London and Great Britain in which the dermatologist was not allowed to treat skin conditions by radiotherapy, and in others where the dermatologist was permitted to treat skin conditions in the hospital but only up to a total dosage of 500-600 r. I mentioned that in Sweden dermatologists were not allowed to treat any cases with X-ray, and that at a hospital in Sydney, Australia, the dermatologist prescribed the doses for benign conditions but the radiologist supervised this dosage and malignant conditions were seen by the dermatologist with the radiologist. I also mentioned that Dr. Cooper, of Brisbane, and Dr. Bray, of Sydney, who is in charge of the radiotherapy department, informed me that the dermatologist is not permitted to treat malignant skin conditions. He is only allowed to prescribe up to 500 r for non-malignant conditions.

Dr. Loewenthal's version of this, 8 years later and without giving the reference, was as follows: 'We were given an impressive list of countries in which (so he had been informed) the dermatologist is either forbidden to use X-ray therapy or is limited to using it in small doses. Personal enquiry in many of these countries has convinced me that the radiologist's leg had been pulled with incredible ferocity.' He also goes on to state that 39 out of 41 participant countries stated that the dermatologist had the right to practise X-ray therapy.

Can there be anything more misleading and inaccurate than Dr. Loewenthal's version? I mentioned a number of hospitals in Great Britain and Stockholm and two in Australia. Dr. Loewenthal calls this an impressive list of countries and states that he had made personal enquiry in these coutries. He is careful not to state that he made enquiries in the countries I mentioned. He tells us several times that he had attended the Congress at Stockholm. Will Dr. Loewenthal tell us whether he made enquiries in Stockholm and whether dermatologists there are allowed to use X-ray therapy either in hospital or private practice? Will Dr. Loewenthal state whether he made enquiries at the hospitals I mentioned in London and Great Britain and whether my statement was true or not? Dr. Loewenthal tells us he attended a conference in Great Britain, and so he must have had ample opportunity to find this out. Will Dr. Loewenthal tell us whether he confirmed my statement with the Sydney and Brisbane Hospitals in Australia? He does not tell us whether Australia was one of the countries in which he had made personal enquiry.

Tactics of this description and this method of debate, incidentally after calling for the 'fair rules of debate,' surely cannot be condemned too strongly. It is an insult to people reading this *Journal* to attempt to put such statements across. From whatever angle one looks at it, it must be condemned. Dr. Loewenthal did not give the references; did he bother to read the original letters on which he based this paper?

Every section of his paper contains statements of similar type and value. He tells us for instance 'that one of the justifications for radiotherapy by dermatologists is that dermatologists have been and are still responsible for many advances in radiotherapy in many countries'. He gives a reference presumably to prove this. This reference, *Strahlentherapie*, 1950, cannot be obtained in any library in this country. The article by R. Schmitz to which he refers does not give the advances made by dermatologists; it is a historical review and contains the names of many physicists and radiologists. This reference to R. Schmitz is, however, given in a booklet called the 'A.B.C. of the Dermopan' prepared by Dr. E. H. Graul for the Siemens Co. and given away to customers.

9. These absurd claims for priority for dermatologists and the amount of work they have done on the subject, are taken from the American dermatological literature. For instance, Osborne[6] states,

'Many of the outstanding contributions through the years in radiology have been made by dermatologists'. Many of the American dermatologists make similar statements. It is rather significant, however, that 22 of the 30 references given in this little book on the Dermopan refer to articles in the radiological literature. I do not think it is an exaggeration to say that for every dermatologist who has made any contribution to radiotherapy, there are hundreds of physicists and radiologists who have done so. One is surprised that Dr. Loewenthal does not claim that every dermatologist should be allowed to use radium or radon either as surface applicators or for interstitial use because the first radium burn sustained by Becquerel himself in 1901 was diagnosed as a radium burn by a dermatologist, Besnier.

10. I must draw attention to Dr. Loewenthal's statement: 'I also wish to make it clear that no responsible dermatologist would suggest radiotherapy should be used by those whose specialist training has not included adequate instruction in the subject. I associate myself with those who would forbid the use of radiation therapy to dermatologists not specifically trained in this method.' If that is so, why does he object to radiologists making this statement? Any dermatologist, whether he has had this adequate training or not, may buy an X-ray machine and treat patients. A dermatologist is not compelled to have any X-ray training and can register as a dermatologist without giving evidence of any such training. How then is the patient to know whether a dermatologist using an X-ray machine has or has not had this training in radiotherapy?

11. He tells us he is on the International Committee of the Education of Dermatologists, which apparently decided last year in Stockholm that there should be 3 months' full-time instruction for dermatologists in radiotherapy. It follows, therefore, that hitherto dermatologists have not been compelled to have such 3 months' instruction; nor are they compelled to have it at present. His description of some of the dermatological clinics on the Continent has nothing to do with the question of whether dermatologists on the specialist's register in South Africa are qualified to use X-ray therapy or not. South African dermatologists, with possibly one or two exceptions, were not trained on the Continent.

12. His section on the treatment of skin diseases by radiologists is also a paraphrase of some of the arguments used in the American literature. He again states that he knows of radiologists who have actually treated 'foot ringworm'. It is difficult to understand why Dr. Loewenthal is so virtuous about foot ringworm unless it is but an attempt to use a stick with which to beat Dr. Charlton. The eminent Cipollaro in his letter in the controversy with Dr. Chamberlain mentions the value of X-ray therapy in foot ringworm and the book by MacKee and Cipollaro[7] recommends X-ray therapy for dermatophytoses of the feet under certain conditions; so do some of the radiological books I have quoted. It is difficult to understand how a man of status in his own section of the profession could use futile arguments such as this. Even if there were a radiologist who had used X-ray therapy erroneously, what does that prove?

He cites as the second criticism 'the unsuitability of the X-ray equipment' generally used by the radiologist for the treatment of skin conditions. Dr. Loewenthal's ignorance of radiologists and their apparatus is simply amazing. He does not seem to realize that even a deep therapy unit may be operated at a low voltage suitable for skin diseases. This argument, too, is of course taken from the letters to which I have already referred. He says radiologists' treatment of skin conditions rely 'on heavily filtered penetrating high-voltage radiation which is delivered to deeper structures where it is . . . potentially dangerous'. It is difficult to describe nonsense of this type. Quite apart from the fact that deep-therapy units can generally be operated at low voltages, radiotherapists have other X-ray therapy machines available. It is the dermatologist who has to rely on a single machine.

13. Dr. Loewenthal becomes quite lyrical on the subject of the beryllium window used in the tube for Grenz-ray therapy. He does not seem to know that for years there have been deep therapy machines with beryllium windows available. His enthusiasm for Grenz-ray is unbounded and he refers to a flood of publications, but only gives references which cannot be obtained in this country. An assessment of the value of Grenz rays may be obtained from an address by Professor Pillsbury[8] and the subsequent discussion. There is nothing that a dermatologist can do with Grenz rays that a radiologist cannot do with X-rays. Dr. Loewenthal repeats the argument of the American dermatologists to which I have already referred that the dermatologist knows exactly the depth of the lesion and that the X-ray therapist therefore cannot treat these lesions. It is the extraordinary ignorance of what radiotherapists treat and how they go about it on the part of Dr. Loewenthal and the other dermatologists that makes it quite frustrating and hopeless to debate with them. A radiotherapist is apparently able to treat a carcinoma of the larynx, a carcinoma of the breast or a carcinoma anywhere else and he is expected by the specialists in those particular branches to do so. A radiotherapist can work out the dosage to be delivered in depth to these tumours, but when it comes to the skin he just cannot do it. He cannot look up a chart and see what the penetration is at 50 KV, say, for a certain area and certain focal skin distance. It is just beyond the radiologist's capacity!

He refers to total body radiation at 50 KV and again there is a reference to a journal which cannot be obtained in this country. He does not seem to know that total body radiation has been practised for years, at various voltages and various intensities, such as the Heublein technique at the Memorial Hospital in New York.[9]

Dr. Loewenthal mentions that dermatologists use isotopes and refers to thorium X.[10] The use of thorium X in this country is forbidden without the special permission of the Atomic Energy Board or the C.S.I.R., and there is no dermatologist who could have used isotopes or is qualified to use isotopes in South Africa or would be permitted to use them.

The main issue, however, which Dr. Loewenthal avoids, is that South Africa is different from any other country in having a specialists' register. For every speciality, rules and regulations are laid down restricting practitioners in one speciality to that speciality. A thoracic surgeon is not expected to remove a gall-bladder no matter how much experience he may have had of general surgery before becoming a thoracic surgeon. Similarly, a neurologist may have had as part of his training years of experience as a neuro-surgeon and yet the neurologist is not permitted to operate as a neuro-surgeon. An ear, nose and throat surgeon cannot remove a thyroid for thyrotoxicosis although he removes a larynx for a carcinoma. No specialist in any other branch of medicine would dream of putting up an X-ray apparatus to treat his patients or would be permitted to do so. X-ray therapy is part and parcel of the treatment of carcinoma of the breast; will a general surgeon ever put up an X-ray unit to treat it?

Clinicians of the Memorial Hospital, New York, all had more radiotherapy training than dermatologists are expected to have and yet the scheme for the prescribing by clinicians of their own therapy was a failure and it has been abandoned.

14. The S.A. Medical and Dental Council either did not expect dermatologists to do X-ray therapy or overlooked the fact that they might do it, and therefore did not lay down any regulation that dermatologists who wish to practise X-ray therapy must show proof that they are competent to do it. It is possible for a dermatologist who has not had training in X-ray therapy and is not competent to do it to buy an X-ray machine and proceed to treat his patients merely after reading the little book on the Dermopan or not even that.

The public knows we have a specialists' register. Does it not follow that a patient going to a dermatologist for treatment is under the impression that when a dermatologist uses an X-ray machine he is invariably competent to do so; the patient is thus being misled. The patient thinks that he is being treated by a specialist in radiotherapy. I cannot visualize the dermatologist saying to his patient, 'I am a specialist in dermatology and not a specialist in X-ray but I will give you treatment all the same'.

The dermatologist sees patients who come directly to him as well as those who are referred to him, not necessarily for X-ray therapy. There are, therefore, several objections associated with the scheme of X-ray therapy by dermatologists. The patient may, and frequently does, according to Professor Chamberlain, a radiologist, and Professor Pillsbury, a dermatologist, receive X-ray therapy when it is unnecessary and when the condition could have been cleared up with ordinary dermatological treatments only. Small doses of X-ray given at weekly intervals up to a maximum total of 400 or 500 r will not do the patient any harm and it will never be possible to say whether the patient would or would not have improved to the same extent without X-ray because, in general, the treatment is uncontrolled.[11] The second objection is that a dermatologist, inexpert and untrained, in radiotherapy, may overdo this treatment and do the patient

harm, as Professor Chamberlain, a radiologist, and Professor Pillsbury, a dermatologist, have demonstrated.

15. What is the position with the radiotherapist? A radiotherapist does not see patients directly. They are always referred by another specialist or general practitioner. The patient is therefore assured that X-ray is only being given after every other remedy had failed and that X-ray therapy is the recognized method of treatment for his particular condition. The patient also has the assurance that the radiotherapist has shown the Medical Council that he has had the minimum amount of training and qualifications to undertake therapy, and the patient remains under the control of his own doctor, who may stop the treatment if he is dissatisfied and to whom the radiologist has to report on the progress of the patient.

Dr. Loewenthal's contention that the radiotherapist knows nothing about skin diseases is surely nonsense. The ear, nose and throat man might argue that the radiotherapist knows nothing about carcinoma of the larynx or the surgeon might argue that the radiotherapist knows nothing about carcinoma of the breast. Dermatological conditions are the easiest and simplest to treat with radiotherapy. I have indicated that the vast majority of dermatological conditions are treated by dermatologists with the simple formula of 75 r once a week up to say 500 r, or 200 Grenz rays per week up to 800 r. It is only in localized conditions that more is given. Radiotherapists, as a rule, use much smaller doses than dermatologists. Lectures on radiotherapy of dermatological conditions are given as part of the diploma for radiotherapy and be it noted that at these lectures dermatologists are permitted to attend.

It is abundantly clear that many noted dermatologists and radiotherapists consider that the use of X-radiation in the treatment of skin diseases is badly overdone and more often than not is unnecessary. One need only refer to the article by Twiston-Davies, dermatologist at the Manchester-Salford Hospital for Skin Diseases, to realize the difference of opinion amongst dermatologists on the value of X-ray therapy even in such conditions as eczema, for which X-ray therapy has been such a popular method of treatment. He states for instance: 'I also have the impression that during the war years 1939-45 I did not see a single soldier who was helped by X-ray and that since the war I have seen only one patient with eczema out of a grand total of about 50,000 new cases seen who responded at all impressively.' He summarizes the whole position as follows: 'Disguise or suppression of the truth is bad for science, blunts our own powers of perception, and must even come under the suspicion of being bad for the patient.' It is difficult to believe that with modern views on the value of X-ray therapy in dermatology any private dermatologist can find sufficient patients to treat in his own practice to justify the employment of a full-time radiographer or even the purchase of an X-ray machine.

16. Dr. Loewenthal's affirmation of the necessity for training in radiotherapy does not alter the fact that a dermatologist can give this treatment in South Africa as well as elsewhere, in spite of the specialists' register, without such training. It is time that the Medical Council took cognizance of this position. I know of a number of dermatologists who have had many years of experience at radiotherapy but I am afraid that many dermatologists have not. There are other dermatologists who have courageously refused to buy X-ray machines.

The solution of this problem of the dermatologist and radiotherapy lies in one of the following two directions:

(*i*) That the Medical Council should lay down a standard of radiotherapy for the dermatologist before putting his name on the specialists' register or, as the position is with all other specialities, that the dermatologist should stick to his own speciality, which is dermatology and not radiotherapy.

(*ii*) The Medical Council created a specialists' register for the protection of the public. Why is not this protection extended to the public, therefore, as far as X-ray therapy by dermatologists is concerned? The Atomic Energy Board has also laid down rules to protect the public from unnecessary radiation. Why does it not take action against dermatologists who have used thorium X without permission when it is so anxious that radiologists should observe the rules and regulations pertaining to radio-active substances?

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