posteriorly. X rays showed a well-defined shadow in the apex of the left upper lobe (Fig. 5). Pneumothorax proved the mass to be intrapulmonary, and, in view of the history, probably a secondary deposit (Fig. 6). The upper two-thirds of the left upper lobe were removed through an intercostal incision. Apart from some temporary collapse of the left lower lobe, due to a mucus plug in the bronchus, which was coughed up later, convalescence was uninterrupted (Fig. 7). This patient is alive and symptomless to-day, three years after operation.

Occasionally the rapidity of development of secondary deposits of limited extent in the lungs is diminished by deep x-ray therapy, and this treatment should be recommended only when its limitations are fully realized.

In the past, when a diagnosis of malignant disease was established, the tendency has been to abandon all hope. As diagnosis is becoming possible at an earlier stage it is surely time that some definite efforts should be made to deal with the problem of malignant disease of the lung in a more active way than by palliation of symptoms alone.

CATARACT OPERATION IN EXTREME OLD AGE

BY

R. H. ELLIOT, M.D., F.R.C.S.

LIEUT.-COLONEL I.M.S. (RET.)

It is commonly urged by relations that a patient is "too old for an operation for the removal of cataract." During the course of my experience in cataract operation, running into many thousands of extractions, I have on four occasions operated on patients 90 years old and over, and on one just before her ninetieth birthday. In addition to this I have operated on a very large number of patients between the ages of 80 and 90. No experienced operator will dispute that a cataract extraction is a shock to the patient, and that the lives of some old people are shortened by procedures of the kind injudiciously undertaken. The fact is worth noting that in all five cases the operation was successful, and also the further fact that in not one single instance does it appear to have shortened life. Before discussing the reason for this a few details of these cases may be of interest.

The first patient was a woman in Madras whose skin hung on her in satiny wrinkled folds, resembling the skin of an animal rather than that of a human being. She claimed to be "very, very old," but, like a number of the natives of India, could not give her exact age. She could say, however, that her eldest son fought in one of the Sikh wars. My assistants were able to calculate from this that, even allowing for the very tender age at which Indian women become mothers, she must have been at least 96 at the time of the operation, and possibly several years older. Not only did she make an uninterrupted and perfect recovery, but she signalized the event by stealing a necklace from under a neighbour's pillow the first night that her eye was released from the bandage. The result was that I had to interview her and the outraged lady in the orderly room next morning.

The next case was that of an old retired civil servant, who, being told that an operation for cataract was necessary, refused to have it done until after his ninetieth birthday, as he had undertaken to give a bride away on that date. He also made an uninterrupted recovery, and appeared to suffer no shock from the operation. A year later he came to see me, asking me to inspect my handiwork; he brought with him cuttings from an illustrated paper with his photograph, and the legend beneath it that he had made a record "drive" for his age. Considering the very small number of people who play golf at 91, the statement might readily be accepted. He was extremely indignant because his drive, as given in the

press, was, he maintained, ten yards short of the length he had really driven. (A true golfer!) I have lost sight of him for a good many years and conclude that he is dead.

The third case was that of an old general who had served many years in the Indian Army. I first operated just after his ninety-fifth birthday for double glaucoma. Six months later I extracted a cataract from one eye. The operations were successful; he stayed only the usual fortnight in the nursing home, and did not appear to be unduly depressed by the shock he had sustained. Whenever I went to see him he had a racy story to tell me. On the occasion of my visit to him in the home on the night before the operation he assured me that he felt quite young, and to satisfy me on this point he insisted on the nurse dancing one of the new steps with him round his room while he vigorously hummed a tune.

In the fourth case the patient was a man very distinguished in public life in his day, and accustomed to having his own way. He had both cataracts extracted towards the close of the ninth decade of his life. An after-ataract formed some time later in one of his eyes. His family were desirous that he should not undergo further operation, and, needless to say, I was very unwilling to undertake any procedure on him after 90 years of age, in view of the fact that the vision was quite reasonably good with the eye in question, while he could read diamond print and had 6/5 vision with the other. I tried to dissuade him, but he turned very determinedly on me and asked, "Do you think I shall see better with that eye if I have it operated on?" I replied, "Yes, but there is an element of risk to your life in this case which I do not feel justified in taking without putting the matter very clearly before you." His reply was, "Well, that is settled. I will come into the home." He was a perfect patient, as he always had been, and once again showed no sign of shock; his recovery was even and uninterrupted, and he regained the sight which he formerly had, equal to that of the other eye.

The fifth patient was operated upon a few months before her ninetieth birthday for a cataract of the Morgagnian variety. The operation was performed in two stages. The patient was stone deaf, and the only possible means of communicating with her was by the hands. We had to establish a code before the operation with signs for "look down," "look up," etc. She was a model patient, and in consideration of her great age she was allowed to sit up in bed the day after the operation. She remained in the home the usual fortnight, making a perfect recovery. Later she was fitted for glasses, though on account of her deafness it was a matter of great difficulty to conduct an accurate test. Her distance vision, under correction, was 6/12, and she read No. 2 (pearl) print easily. She is now over 92, and I recently heard that she was doing well.

Colonel Kirkpatrick has very kindly allowed me to include in this record a case of his own, in an old "John Company" pensioner, 96 years of age, upon whom he operated in Madras. He cannot remember with absolute certainty whether one or both cataracts were extracted, but he is practically sure that the old man came back three or four months later for the second eye to be treated. The point of great interest is that the patient had rhinophyma, causing a marked disfigurement of his nose, and that after the recovery of his sight he insisted on having this operated on at the General Hospital, Madras. He went home with a greatly improved appearance, having regained the strikingly handsome looks of his earlier years—not a bad sequel at about 97.

COMMENTARY

It is probable that very few surgeons have had the opportunity of operating on so many patients at such very advanced ages, and this seems to justify a short note on the cases. What appears to me of much more interest is: (1) that in every one of these cases the operation was successful; and (2) that in none of them was the shock of the operation severe. Remembering how many patients aged 70 or less are in too frail a condition to be submitted

to a cataract operation, and recalling the cases in which it was feared that life was definitely shortened by the shock of the procedure, even though the patient did not die for many months afterwards, the question arises, How is it that these old patients stand operation so well? I think that the answer lies in the extraordinary vitality that has enabled them to live twenty years and longer beyond what is usually accepted as the allotted span of life. The little incidents I have related in connexion with them illustrate the vitality that radiates through these exceptional specimens of the human race. Their protoplasm appears to be of a more active and resistant nature than that of most of their fellows, and I suggest that it is this that makes them such good subjects for operation. It is not without significance that such people usually have warm hands and feet—an indication, one may suppose, of an active thermotaxic centre and of excellent circulation. The joy that they obtained out of their restored sight was delightful to see, and I can unhesitatingly say that, given the conditions I have mentioned in these cases, I would sooner operate on such subjects than on many who are only in the sixth and seventh decades of life.

HYDATID DISEASE IN ENGLAND

BY

JAMES F. BRAILSFORD, M.D., M.R.C.S.

THE QUEEN'S HOSPITAL, BIRMINGHAM

(With Special Plate)

Hydatid disease is not a rare disease in this country, although its frequency is much less than in Iceland and in the countries with extensive sheep farming—for example, Australia and the Argentine.

ANIMAL INFESTATION

While investigating the pathological conditions of food animals, I visited the Birmingham public abattoir daily for several years, and every day saw the viscera of sheep, cattle, or pigs infested with the parasite of this disease. Some herds were extensively infested, others free. In a few cases only a solitary cyst was discovered in the animal; in the majority the cysts were multiple, almost completely destroying the normal tissue. The organs so infested were greatly increased in bulk and weight; in some cases cows' livers weighing 200 to 250 lb. were seen, the normal being about 14 lb. (Figs. 1 and 4). Examples of human infestation are seen in hospitals from time to time, and these always attract attention by the variety of the manifestations of the parasitic invasion and by the interesting characteristic features of the hydatid cyst and its contents. No fewer than three hundred articles relative to cases of hydatid disease have been published during the last five years. That we see the disease so frequently in food animals and occasionally in man indicates that conditions are allowed to exist which permit of the completion of the life-cycle of a parasite capable of producing a very dangerous disease in human beings. This is regrettable because, thanks to the researches of Cranwell, Dévé, Dew, Fairley, Graham, Leukart, Thomas, Vegas, and many others, we have the knowledge which would enable us to eradicate the disease from Great Britain as we have done with rabies and other contagious diseases of animals. Every local authority has by-laws which contain a clause prohibiting the dog from slaughterhouse premises, but this by-law is not as strictly enforced as it should be. The parasitic cysts being common in food animals, and not affecting the sale of the meat of the animal, odd cysts are cut off and thrown on the floor by

the butcher while trimming the viscera for sale. He thinks no more of the cyst than he would of a clot of blood or other waste fragment. Further, sheep's lungs, which sometimes one has seen so extensively packed with cysts that little normal tissue remains, are not sold for human food; they are put on one side as food for dogs and cats. Dogs are permitted to enter slaughterhouse premises and help themselves to the exposed refuse of the establishment, including any of these odd cysts which may have been thrown on the floor. Again, slaughterhouse refuse is sometimes used for manure, being spread over fields to the joy of all the dogs of the neighbourhood. The adult parasite *Taenia echinococcus* has been found in the wolf, jackal, jaguar, and fox. Obviously only the last may be a source of spread in this country. It is difficult to get foxes for examination, but during the past three years I have examined the intestines of four foxes without finding any echinococci. The part which the fox plays in dissemination could readily be ascertained if a careful inquiry were made into the source of infestation of food animals of the district. At the abattoir are evidences of herds which are badly infested, and if the farms on which these animals are reared were visited, and the dogs known to frequent the particular farms examined, it should easily be possible to find the host or hosts of the adult parasites. Town dogs appear to be fairly free from infestation. In 1920 I made post-mortem examinations on 100 dogs which had been destroyed for various reasons at the Dogs' Home, but in no case did I find *Taenia echinococcus*, although 65 of them were harbouring other tapeworms. I have no doubt from the frequency of the cysts in food animals that the examination of a similar number of dogs in rural districts, particularly sheep dogs, would show a definite number to be harbouring the adult *Taenia echinococcus*. Krabbe discovered the parasite in 25 per cent. of the dogs of Iceland, while 15 to 100 per cent. of the dogs in different districts in Australia have been found to be infested. During recent years the Australian authorities have adopted active measures of prevention, and it is apparent that the percentage of infested dogs has considerably diminished. In this country there is no active propaganda against the parasite. Even the Board of Agriculture and Fisheries does not seem to think it of sufficient importance to issue a leaflet of instruction as it does with diseases of animals much less dangerous and of less economic importance. The possibility of the disease being spread by the cat should not be absolutely ignored, for Dévé has infested the cat experimentally, and cats are frequently fed on raw sheep's lungs. It is probable that the cat is spared infestation by the owner rejecting "lights" containing large cysts, or by the cooking of this food.

HUMAN INFESTATION

Although Dévé has proved experimentally that cysts can develop if the ova are introduced into the bronchi, it is unlikely that many cases of human infestation occur from the inhalation of dust containing ova. Certain possibilities for this exist during the brushing and combing of a dog whose hair has been soiled by faeces containing ova; but a more probable mode of spread is by soiling the hands with ova which are transferred to the mouth, particularly by children whilst eating. It is not always easy to trace the source of infestation. In 1920 I visited the homes of ten patients suffering from, or who had died from, hydatid disease. In one case, where the occupier said that they had never kept a dog, I saw dog excreta on the floor under the table in the living room, and a child crawling about the floor. On pointing this out, I was told that the "mess" had been made by a neighbour's dog, which came in at meal times. I persuaded the owner to sell this dog, which was about