

another," but on surveying a number of cases it shows a manifest predilection for certain seats. Thus, of about 430 cases in which the affected joints were recorded the knee-joint was affected in 297 instances (69 per cent.), the ankle in 202 (47 per cent.), and the shoulder in 115 (26 per cent.). The elbow, the wrist, and the small joints of the hand and the foot were affected with nearly equal frequency (from 80 to 100 cases); the hip came next with 54 cases and the spine with 37 cases. The neck was affected 11 times, the sterno-clavicular joint eight times, and the temporo-maxillary articulation twice. In 24 cases all the joints were said to be painful, but this vague statement probably only signified the general discomfort and misery of the sufferers. It thus appears that the knee and ankle are nearly twice as often affected as any other joints. The hip-joint, a very frequent seat of rheumatoid arthritis, is not often attacked in rheumatic fever. In a few instances traumatism of a joint (strain, &c.) seems to have determined the seat of onset of the malady.

*Complications.*—The most frequent complication of acute rheumatism—if it is to be called a complication and not, as seems more probable, a distinct feature of the disease—is undoubtedly endocarditis, and in the present series of cases it was found in 67 males (28 per cent.) and 70 females (33 per cent.) either as recent endocarditis or old valvular disease. In the former sex the mitral valve was affected alone 51 times, the aortic alone in four cases, and both together in 12 instances. In the females the aortic valve suffered alone on two occasions and combined mischief was only met with once, the rest being pure mitral cases. Ulcerative endocarditis occurred in three patients.

Pericarditis was met with in 17 males and 11 females. Of these three died, but in only one of the fatal cases, that of a girl, aged five years, was pericarditis the sole complication, the other two patients having pneumonia, associated in one case with hyperpyrexia. If we add to the above 28 cases of pericarditis 32 others occurring in the hospital in the same period we find that out of a total of 60 cases of this affection 46 (nearly 77 per cent.) occurred in the course of acute rheumatism or were considered "rheumatic." The total mortality of the 60 cases was 19 or nearly 32 per cent., but in four of these the disease was associated with pneumonia, in two with phthisis, and in two with granular kidneys and cirrhosis of the liver respectively. The deaths, therefore, in rheumatic cases, apart from other complications, were nine out of 46 patients, or nearly 20 per cent. On the other hand of 10 cases associated with pneumonia six patients died, or 60 per cent. Two suppurative cases occurred in rheumatic subjects, included in the above numbers, and were both fatal; but they were not associated with symptoms of rheumatic fever at the time of their occurrence. If they were subtracted from the above numbers the mortality of sero-fibrinous pericarditis complicating rheumatic fever would appear to be only about 15 per cent.

The frequency of the occurrence of relapse in cases of rheumatism is difficult to estimate, owing to the fact noticed above that many of the instances of long duration of the illness before admission to hospital are probably due to a series of relapses. Actual instances could be made sure of in 42 cases, or roughly 10 per cent., but the figures are not of much value.

Pneumonia occurred in 14 cases of the present series, equally divided between the two sexes. Of these two, accompanied by pericarditis, were fatal. The total number of cases of pneumonia occurring in the hospital in the period recorded was 300 and in 24 of these—8 per cent.—there was more or less reason to associate the disease with rheumatism. It is an interesting speculation to what extent the two diseases are connected, and it is permissible perhaps to surmise that in cases of pneumonia, especially those which run a rather atypical course and end by lysis, closer search would reveal a rheumatic predisposition more often than is at present suspected. In only two of the above 24 cases did the disease end by crisis. The value of salicylate of sodium in acute pneumonia is also of interest in this connexion.

Hyperpyrexia occurred in two cases only, in one of which it was associated with pneumonia. The number seems small, and it is possible that early treatment with salicylates prevents a more frequent occurrence of this fatal complication. Pleurisy was found 14 times and bronchitis in 22 cases; in one patient the latter malady seems to have been responsible for a fatal issue.

Chorea occurred in two males and 11 females, giving an

average of nearly 3 per cent. The oldest patients were two girls, 19 years of age. Delirium was noticed in nine cases, chiefly males, several times associated with alcoholic habits, but not always so. In two women there was troublesome neuralgia of the face. Severe abdominal pain was complained of in 13 cases without obvious cause, and diarrhoea occurred in two instances. Four cases presented symptoms of nephritis, two being of the chronic interstitial variety, one a subacute tubal nephritis and one an acute attack; this last occurred in the hospital without any cause that could be discovered other than the rheumatic fever. A purpuric eruption occurred in two cases and hæmaturia in three others, probably due in one case to embolism and in another very possibly to papilloma of the bladder. Epistaxis was twice observed. In one case blood was passed per rectum without obvious cause other than the general disease. Phlebitis occurred once and arterial thrombosis (endarteritis?) affecting the temporal and occipital arteries also in one instance. Of skin-affections, erythema nodosum<sup>2</sup> was observed in nine instances (2 per cent.), all females, and other forms of erythema multiforme in four others (three being women); in two cases it was possibly due to the effect of salicylic treatment. Subcutaneous nodules occurred in five cases, the oldest patient being a woman 26 years of age. In one instance they were the seat of considerable pain. Accidentally associated diseases were gout in six cases (showing that the two diseases are not incompatible), phthisis, Graves's disease, epilepsy, tabes dorsalis, cirrhosis of the liver, and ague.

*Death.*—In no case of the present series did death occur from an uncomplicated attack of rheumatic fever. Seven cases proved fatal altogether (about 1.5 per cent.), six patients being males and one a female. Two of these cases were due to pneumonia accompanied by pericarditis, one to pericarditis alone: hyperpyrexia accounted for one more. Two cases proved fatal owing to ulcerative endocarditis and one to bronchitis.

*Treatment.*—With regard to this little need be said. Rest in bed, fluid diet, and salicylate of sodium constituted the routine treatment in all cases. It was often possible to trace a close connexion between the occurrence of a relapse and an unduly early return to fuller diet or a premature omission of the specific drug. In obstinate cases alkalies were tried but did not seem to have much effect. Iodide of potassium, however, occasionally seemed serviceable, aided by blistering of the affected joints in very chronic cases. A recent patient, not included in the above series, appeared to derive benefit from treatment with hot air, a method which is certainly worthy of trial in many cases of chronic joint-disease.

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## ON OPERATIONS FOR CANCER IN THE AGED.

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IN THE LANCET of May 5th, 1900 (p. 1276), there appeared a paper by Mr. T. Frederick Gardner entitled "Three Cases of Surgical Interest." The first of the series—a scirrhus cancer of the breast—raises the question of the advisability of operating for cancer in extreme old age. This case has for me a peculiar interest, as a similar case occurred in my practice about two years ago which, taken in conjunction with Mr. Gardner's case, may be worth recording and prove interesting to others.

A spinster, aged 82 years, thin, wiry, and intelligent, somewhat feeble, but for her years in fairly good health, consulted me on March 18th, 1898, for a painful tumour in the left breast, which, she said, she had noticed about a fortnight previously. She told me that she had been "out of sorts" for several months and she thought that she had been losing flesh. On examination I immediately found a nodular swelling of stony hardness of about the size and shape of a plover's egg in the left breast, situated about an inch below, and external to, the nipple. The skin over the tumour was freely moveable except at one point

<sup>2</sup> The total number of cases of erythema nodosum admitted in the eight years was 20, of which only three were males, aged respectively 12, 14, and 17 years. The oldest female patient was aged 31 years, the youngest seven years. In the latter the condition was accompanied by glandular enlargement.

where it was dimpled and evidently becoming adherent to the parts beneath while there was a tendency to retraction of the nipple. The tumour was moveable, but not freely so, in the surrounding breast tissue. In the axilla a hard gland as large as an almond was felt under cover of the border of the great pectoral muscle and several smaller shotty glands were apparent higher up. The pain, which was acute and tended to recur in paroxysms, was of a "sharp stabbing" character and was felt not only in the tumour but "down the inner side of the left arm" as far as the elbow. This symptom, which first led the patient to take an anxious view of the situation, was increasing rapidly in severity and was telling considerably on her general health, interfering with sleep and giving rise to much mental distress. Such, then, in brief, is the history of the case to which I wish to call attention.

For reasons which I shall presently state, notwithstanding the patient's feeble state of health and advanced age, I determined to operate and the patient readily consented. Accordingly, on March 23rd, chloroform was administered by my friend Mr. G. Everitt Norton, and I removed in one mass the whole of the left breast, the underlying pectoral fascia, and the axillary glands, together with the whole of the axillary cellular tissue, which was studded with numerous small shot-like nodules. The operation lasted some 40 minutes and was accompanied by considerable shock, from which, however, the patient soon rallied. The wound was dressed for the first time after the operation on the eighth day and union was found to be perfect. The patient was completely relieved of her pain, her appetite returned, she gained flesh, slept well, and became more cheerful. She got up on the fourteenth day and in another week left the nursing home for her own abode. The stiffness in her arm soon disappeared and she was able easily to approximate the palm of the hand to the occiput. Her general health continued good and the patient enjoyed life in her own way without pain or any sign of recurrence to the day of her death, which took place suddenly from heart failure on Oct. 20th, 1899, 19 months after the operation, she having been out for a walk the evening previously. The result, I think, quite justified the procedure resorted to.

"All's well that ends well," says the proverb, and it is easy to shake hands with and congratulate oneself on the success of a perilous venture. In cases such as these the point of prime importance is the accurate gauging of the *pros* and *cons* for operation. In the present instance the patient placed herself unreservedly in my hands, steadfastly refusing to have another opinion, so that on my shoulders fell the responsibility of deciding the momentous question as to whether an operation should be undertaken for her relief or whether she should be left to her fate. On thinking over the case at the time the following questions occurred to my mind: 1. Is it possible to remove the whole of the disease with good prospect of subsequent immunity? 2. Supposing this question to be answered in the affirmative, is the patient in a fit condition to withstand the shock necessarily attendant on a somewhat prolonged surgical operation under anaesthesia? 3. Supposing the two foregoing questions to be answered in the negative, what will be the probable subsequent history of the case if left to run its course? In other words, one had to weigh the risk of shock and risk of recurrence after removal with their attendant consequences against the inevitable increase of the tumour, which would probably sooner or later ulcerate, and the increase of pain which opiates sooner or later would cease to relieve. In the present case the facts seemed to me to be as follows:—1. The complete removal of the disease would entail an extensive operation which would occupy some time and give rise to considerable shock. 2. The patient, though somewhat feeble and advanced in years, was in fairly good health, thin, wiry, and of a cheery, hopeful disposition, and she should be, for her age, possessed of fair rallying powers. 3. The growth was evidently increasing rapidly and the pain was already as much as the patient could bear. On reviewing these facts carefully I came to the conclusion that notwithstanding her advanced years it would be better, on the whole, for the patient to run the risk of operation rather than to face the inevitable and in all probability be condemned to a life of suffering and a miserable death. How far this opinion was justified by the result the brief notes of the case above related bear witness.

No doubt, as Mr. Gardner remarks, cases of scirrhus in people of advanced age are rare. This, I take it, is due partly

to the fact that the number of people who reach advanced age, say of 30 years, is comparatively small, and partly that those who do survive to such an age have outlived the time of life at which the incidence of cancer is common. But the chief lesson to be learned from cases such as Mr. Gardner's and my own is, I think, that while we should by no means under-estimate the increased risk which must necessarily occur in operating on the aged we should not without the most mature consideration withhold from a patient, however old, the benefits which surgery alone can bestow.

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## A CASE OF TWO ANEURYSMS OF THE TRANSVERSE ARCH OF THE AORTA.

By GILBERT J. ARNOLD, F.R.C.S. ENG.

THE following is an account of a case which presents some points of interest.

A patient, a man, aged 40 years, consulted me on March 23rd, 1900, stating that the previous night he had been somewhat alarmed by an attack of difficult breathing. He further stated that he had suffered for some years from bronchitis and emphysema of the lungs and latterly occasional attacks of spasmodic asthma for which he had been under treatment abroad. His voice was hoarse and there was sometimes a dry cough. He had marked inspiratory stridor. The hoarseness had, he said, come on suddenly a few days previously. A laryngoscopic examination revealed the cause of the hoarseness. There was abductor paralysis of the left vocal cord. The larynx was normal in other respects. I should have mentioned that the patient had had, and been under treatment for, syphilis some 16 years ago. A thoracic aneurysm involving the left recurrent laryngeal nerve appeared by far the most probable diagnosis, but an examination of the chest did not reveal any abnormal pulsation, any murmur, any dull area on percussion, or cardiac hypertrophy, neither was there any inequality of pupils or difference in the radial pulses. I did not find tracheal tugging well marked. A guarded prognosis was given and potassium iodide was administered, gentle walking exercise being allowed. A few days later the condition of the vocal cords was practically the same—the right cord moving well and the left relaxed in the cadaveric position; there was therefore some paralysis of adduction too. The hoarseness and inspiratory stridor continued unchanged and he complained of very slight difficulty in swallowing. The dosage of iodide was increased. I by no means anticipated that a fatal termination was so near at hand. On April 16th the patient sent for me on account of slight hæmoptysis. He was put to bed, the services of a nurse were obtained, and the recumbent position was insisted on. Ergot was administered and ice was given to suck. The hæmoptysis, which amounted to half a wine glassful of bright red frothy sputum, ceased within two hours. The patient informed me that he had spat blood on one occasion about three weeks before. He died the next day in bed from a sudden profuse hæmorrhage from the mouth.

*Necropsy.*—The heart and lungs were practically normal except that the bronchi were partially filled with blood. Arising from the convex upper border of the transverse arch of the aorta was a firm sacculated aneurysm situated between the origins of the innominate and left subclavian arteries and behind the left common carotid, the lumen of which was somewhat flattened out by pressure of the aneurysm. Passing in front and in contact with the sac, which was of the size of a hen's egg, was the left vagus nerve. The sac was nearly filled by firm buff-coloured clot disposed in concentric laminæ. There was a second sacculated aneurysm of the size of a billiard ball also originating from the transverse arch and communicating with it by an aperture of the size of a crown-piece. This sac was in direct contact posteriorly with the trachea and also slightly with the oesophagus, but did not obstruct these structures post mortem, although it probably did so to a slight degree during life when distended by the blood-pressure. It contained recent blood-clot only. On slitting up the trachea posteriorly there was seen opening into it in front the aperture of a small ragged channel of communication, passing between two of its cartilage rings exactly one and a