Clinical and Other Notes.

PURULENT PERICARDITIS—COMBINED SURGICAL AND PENICILLIN TREATMENT.

BY

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Details of a successfully treated case of purulent pericarditis following pneumonia are given as being considered of sufficient clinical interest to warrant publication.

On 28.1.46 an Indian Sepoy aged 22 was admitted to a military hospital with a three-day history of cough, fever and pain in the chest. His previous medical history contained no illness of note and there was nothing relevant in the family history.

On admission patient appeared acutely ill, rather collapsed and showing respiratory distress—T. 98, P. 66, R. 32, B.P. 100/60. There were moist sounds present over a limited area just below the right clavicle and on this a diagnosis of early pneumonic consolidation was made and treatment with sulphathiazole initiated. Blood slide showing no malarial parasites but leucocyte count was 25,000 of which 83 per cent were polymorphs. Sputum—no A.F.B. 30.1.46; General condition of patient had not improved, pulse was rapid and of poor quality. B.P. 100/64. Heart sounds were distant and apex beat no longer palpable. There was definite evidence of small patch of pneumonic consolidation upper lobe right and a pleuropericardial rub was audible at right border of sternum.

X-ray: “Evidence of a circular patch of consolidation in the right subclavicular region. Heart shadow is triangular in shape and appears to be enlarged in all directions suggestive of pericardial effusion” (Skiagram 1).

Skiagram 1 (30.1.46).—Pneumonic consolidation upper lobe right—early pericardial effusion.
Sulphathiazole was continued and intramuscular penicillin 15,000 units three-hourly commenced.

7.2.46: There had been a steady deterioration noted in general condition and pulse was now of low tension and irregular. Area of cardiac dullness greatly increased—transverse diameter 9 inches. Heart sounds were almost inaudible and irregular in force and rhythm. To date penicillin 840,000 units and sulphathiazole 52 grammes had been given.

X-ray: “Satisfactory resolution pneumonic patch right upper lobe—gross pericardial effusion” (Skiagram 2).

Skiagram 2 (7.2.46).—Satisfactory resolution pneumonic patch—massive pericardial effusion (before aspiration).

8.2.46: Aspiration left border sternum 5th intercostal space—24 ounces of purulent fluid withdrawn and 60,000 units of penicillin injected into pericardial sac. Penicillin 12,500 units three-hourly continued by intramuscular route. The pericardial fluid showed large numbers of pus cells and blood corpuscles but no organisms were demonstrated on smear or culture.

Leucocyte count was now 37,000 with 84 per cent polymorphs.

12.2.46: No improvement in general condition and no reduction in area of cardiac dullness while heart sounds remained irregular and very distant. B.P. 112/62. Pericardial sac again aspirated and on this occasion 18 ounces of blood-stained fluid were withdrawn while a further 100,000 units of penicillin were injected.


14.2.46: In view of the gross effusion and cardiac embarrassment pericardial incision and drainage was decided upon—Major L. J. Temple, R.A.M.C. Under local block with gas and oxygen incision was made 1½ inches from and parallel to mid-sternum. Costal cartilages of ribs 5 and 6 resected and good exposure obtained. On opening pericardium sanguineous fluid under marked tension spurted out to a height of 4 feet above the table. The heart was noted to be coated with a fibrinous deposit. Pericardial edges were sutured to skin and a small tube fixed to lie just inside the pericardium. Penicillin
100,000 units were injected into the pericardium and 10,000 units four-hourly to follow—the intramuscular injections being continued.

Patient stood operation well—by the next day more comfortable. For the following five days tube continued to discharge a sanguineous fluid in decreasing quantity. On 19.2.46 tube was removed and penicillin stopped—quantity given 260,000 units directly into pericardium 360,000 by tube and a total of 1,640,000 by intramuscular route.

Temperature was then fluctuating around 99-100 and pulse was now of better quality and regular though still rapid 100-120. Heart sounds were pure and B.P. 108/68. A thin blood-tined discharge continued from the chest wound which otherwise was satisfactory.

4.3.46: Still running low-grade temperature but general condition greatly improved. R.B.C. 4,400,000 per c.mm.; Hb. 80 per cent; W.B.C. 9,600 per c.mm.; P. 70; L. 28; E. 2. Heart sounds regular but soft. B.P. 94/64.

10.3.46: Clinical evidence of left pleural effusion.

15.3.46 (X-ray chest): “Evidence of effusion left pleural sac with heart shadow displaced to the right” (Skiagram 3).

Skiagram 3 (15.3.46).—One month after operation. Extensive pleural effusion with mediastinal shift to right.

Fluid aspirated from left chest—blood tinged, few epithelial cells and lymphocytes, no organisms demonstrated on smear or culture. Culture for A.F.B. negative.

22.3.46: From left pleural cavity 45 ounces of straw-coloured fluid aspirated. Course of sulphathiazole commenced. Thereafter progress was uneventful—the chest wound finally healed on 4.4.46—seven weeks after operation. The residual effusion left pleura was slow to absorb but no further accident occurred and by 20.5.46 patient was allowed up.

24.6.46: Patient afebrile and with no complaint apart from an awareness of cardiac pulsation. Up and walking slowly around the ward with a steady pulse rate of 70 to 80 per minute. The chest wound was slightly retracted but soundly healed and the scar painless. Heart sounds were of good quality and pure B.P. 106/68. There was no clinical evidence of residual pleuropulmonary mischief.