Anterior Pituitary Insufficiency due to post-partum necrosis of the pituitary was first described by Sheehan in 1939. Secondary thyroidal, adrenal, and gonadal insufficiencies are invariably present but to different degrees. In the case to be described, hypoadrenalism and hypogonadism were present. However, the clinical picture was predominated by pituitary myxedema and was principally manifested by a large pericardial effusion and loculated areas of mediastinal effusions. In the review of the literature, pericardial effusions associated with hypothyroidism have been noted with some frequency. Marzullo reported a case of myxedema complicated by hydropericardium, pleural effusion and ascites. The occurrence of congestive heart failure and serous effusion in a patient with myxedema was recorded by Musso-Fournier. Marks reported 25 cases of myxedema with pericardial effusions, 13 of which were associated with pleural or peritoneal effusions or both. However, no case report was encountered, to the best of our knowledge, of loculated areas of mediastinal effusions.

Case Report

A 33-year-old Puerto Rican woman first entered St. Vincent's Hospital in December, 1955. She had enjoyed good health until nine years prior to admission when she had a severe post-partum hemorrhage after her third and last delivery. Subsequently she did not lactate, became amenorrheic and noted the gradual loss of libido and felt chronically tired, requiring about 12 hours of sleep a day. Since coming to New York seven years before, she had noted a severe intolerance to cold. When first seen, she complained of epigastric pain, nausea, vomiting and diarrhea of two days duration.

On physical examination no blood pressure was obtained, although she was conscious and alert. The temperature was 101°F. Periorbital edema and puffiness of the face were present. The skin was pale and of a silky quality. Absence of axillary and pubic hair was noted. The pupils were equal and fundoscopic examination was normal. The pharynx was markedly injected. The heart was not enlarged and the rhythm was regular at 116 per minute. No murmurs were audible. The lungs were clear to auscultation...

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**Figure 1:** Chest x-ray film on admission was within normal limits (December, 1955). **Figure 2:** Chest x-ray film demonstrates enlarged heart shadow and large superior mediastinal effusion (September, 1958).
and percussion. On examination of the abdomen, epigastric tenderness was noted. The external genitalia were moderately atrophic. No lymphadenopathy was present. Findings on neurologic examination were within normal limits.

Treatment included saline infusions and 310 mg. of hydrocortisone over a 24-hour period. Tetracycline every six hours was added three days later because of the persistence of fever. Thereafter, she improved markedly and became afebrile. The abdominal pain subsided as did the vomiting and diarrhea. The blood pressure rose to 110/70.

Laboratory Data: Red blood cells 3,600,000. Hemoglobin 10.0 gm. Hematocrit 34 per cent. White blood cells 11,100 with 55 per cent neutrophils, 30 per cent lymphocytes, 1 per cent monocytes and 5 per cent eosinophils. Blood urea nitrogen 22 mg. per cent. Glucose tolerance test: fasting blood sugar 67 mg. per cent; one half hour 109 mg. per cent; one and one half hours 87 mg. per cent; three hours 100 mg. per cent. Values for serum electrolytes were as follows: sodium 140, potassium 4.9, chloride 97, CO₂ 25 mEq./L. Other blood chemistry findings in mg. per cent were as follows: Phosphorus 4.2; cholesterol 242; alkaline phosphatase 3.1. Basal metabolic rate was —34. Thyroidal R14 uptake was 7.5 in 24 hours. Thyroid test: 220 eosinophils per cu.mm.; 242 eosinophil count per cu.mm. four hours after the injection of 25 mg. of ACTH. Seventeen ketosteroids 2.9 mg. in 24 hours. Robinson-Kepler-Water test: 10 p.m. 17 cc.; 8 a.m. 800 cc.; 9 a.m. 200 cc.; 10 a.m. 100 cc.; 11 a.m. 35 cc.; 12 noon 20 cc. Skull roentgenograms showed a normal sella turcica. X-ray film of the chest was within normal limits (Fig. 1). Electrocardiogram showed low voltage.

The patient was placed on maintenance therapy consisting of cortisone 25 mg. twice a day. She was discharged improved on her 40th hospital day to be followed in the outpatient department.

She was admitted for the second time on September 10, 1957, with a diagnosis of bronchopneumonia. She had discontinued her medications a few months after discharge following which she noted progressive fatigability and weakness. Physical examination showed a blood pressure of 90/55; temperature 105.4° F. Numerous subcrepitant rales were heard bilaterally at the bases. Chest x-ray film revealed infiltration of both lower lobes. The cardiac silhouette was normal in size and shape. Physical examination was otherwise unchanged from the first admission.

Laboratory Data: Hemoglobin 12.6 gm. White blood cells 7,800 with a normal differential count. The serum electrolytes in mEq./L. were: sodium 130; potassium 5.8; chloride 94; CO₂ 31. Glucose tolerance test: fasting blood sugar 76 mg. per cent; one half hour 135 mg. per cent; one hour 125 mg. per cent; one and one-half hours 115 mg. per cent; three hours 104 mg. per cent. Blood urea nitrogen 19 mg. per cent. Serum cholesterol 275 mg. per cent. Seventeen ketosteroids 8.6 mg.

**Figure 3**
Flat x-ray film of abdomen shows loculated inferior mediastinal effusion (September, 1958).

**Figure 4**
Chest x-ray film shows complete resolution of mediastinal and pericardial effusions after treatment (December, 1958).
in twenty-four hours. Basal metabolic rate was ---30. C-reactive protein 3+. Total protein 7.9 gm. per 100 cc. A/G ratio 4.7/3.2. Electrocardiogram showed sinus rhythm and low voltage.

Penicillin 600,000 units and streptomycin 0.5 gm. twice a day were administered. Within five days, she became afebrile and repeat roentgenograms showed resolution of the bilateral infiltrates. During the fifth week of hospitalization, she complained of constant substernal chest pain associated with fever. A pericardial friction rub was detected at this time which persisted for eight days. During this time, the heart sounds became more distant and chest x-ray films showed the heart to be enlarged in all diameters, consistent with pericardial effusion. The lung fields were essentially clear.

Therapy with tetracycline was instituted every six hours, and ACTH followed by prednisone 60 mg. a day. She became afebrile and her chest pain subsided. Subsequent roentgenograms of the chest showed a persistence of the pericardial effusion. She was discharged to the outpatient department on prednisone 5 mg. twice a day and thyroid extract one grain daily.

She again failed to take medication and was re-admitted in September, 1958 with nausea and vomiting of four days duration. She continued to complain of easy fatigability, intolerance to cold and she was amenorrheic. Blood pressure was 90/60. Physical examination again showed the absence of pubic and axillary hair. Definite periorbital edema and puffiness of the face were noted. The heart was enlarged and the sounds were distant. The remainder of the examination was within normal limits.

Repeat chest x-ray film showed moderate, generalized cardiac enlargement with a slight increase in size since previous examinations. At this time, two large areas of loculated mediastinal effusions were noted. One area was present in the superior mediastinum (Fig. 2); the other was elongated and was located in the inferior mediastinum posterior to the heart (Fig. 4). An angiogram demonstrated the pericardial effusion. The etiology of the mediastinal effusions was somewhat obscure but was felt to be related to the severe hypothyroidism. Because the patient consistently discontinued her medications after leaving the hospital on previous occasions, arrangements for a prolonged hospital stay were made, and vigorous thyroid therapy was instituted. Treatment consisted of triiodothyronine sodium (Cytomel) 25 micrograms which was gradually increased to 110 micrograms daily over a period of three months. Thyroid extract grains one half twice a day was then substituted.

Under the hospital regime, the patient appeared more alert and the periorbital edema and puffiness of the face subsided. The data concerning adrenal function was reviewed and was felt inadequate to support the diagnosis of secondary hypoadrenalism and therapy was therefore discontinued.

By the fourth month of this treatment repeat chest roentgenograms showed complete resolution of the mediastinal effusions and a return to normal in the size of the heart (Fig. 4). The patient has since been discharged and is currently being followed in the outpatient department on maintenance dosage of thyroid extract.

REFERENCES