ANAESTHETIC MANAGEMENT OF ABDOMINAL DISTENSION

(A Case Report)

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SUMMARY

The anaesthetic management of a patient with a large ovarian cyst is described. Respiratory distress was assumed to result from abdominal distension, and a detailed examination of the chest was not performed. Thus a pleural effusion was diagnosed and treated only when the respiratory distress recurred 8 hours after the operation.

Preconceived views in certain situations may lead to gross errors of omission. The following case report illustrates this point.

CASE REPORT

A 25-year-old female patient was admitted to hospital with complaints of amenorrhea for 9 months, abdominal distension for 6 months and swelling of the legs for 3 months. She had slept poorly for the previous 2 months because of extreme breathlessness. The swelling had increased gradually, extending upwards from the lower abdomen.

On examination, the patient appeared exhausted and grossly undernourished. The pulse was regular but rapid (140 beats/min). Respiration was laboured and shallow, and the respiratory rate was 36 b.p.m.

The accessory muscles of respiration were active, and the subcostal angle was markedly widened. On auscultation of the chest, crepitations and rhonchi were audible at both lung bases and air entry was poor throughout. A soft systolic murmur, most marked in the pulmonary area, was detected. The arterial pressure was 100/40 mm Hg.

The abdomen was so enormous that the patient appeared to be hidden behind the huge swelling (fig. 1). A fluid thrill and shifting dullness were elicited. A second-degree uterine prolapse was present also.

The haemoglobin concentration was 5.5 g/100 ml, serum electrolyte concentrations (Na⁺, K⁺, Cl⁻, HCO₃⁻) were within normal limits and there were no abnormal biochemical findings in the urine.

A large ovarian cyst with second-degree uterine prolapse and severe anaemia were diagnosed.

On the day of admission, 3600 ml of blood-tinged fluid was tapped with a view to relieving the respiratory embarrassment. The fluid showed a protein content of 5 g/100 ml and a cell count of 148/ml.

500 ml of whole blood was transfused and haematinics and a high protein diet were given.

In view of a continuing respiratory embarrassment, which was attributed solely to abdominal distension, it was considered essential to remove the cyst and the patient underwent an operation 5 days after admission.

Premedication was with atropine 0.6 mg and promethazine 25 mg and the patient was placed on the operating table, almost in a sitting position.

As the induction of unconsciousness in a patient with active accessory muscles of respiration was considered dangerous, a small incision was made in the midline below the umbilicus under local infiltration analgesic and fluid was drained until the distension was completely relieved. Thereafter, the head end of the table could be
made flat without making the patient very uncomfortable. She had breathed 100% oxygen given from a mask while the fluid was being drained, and nitrous oxide and diethyl ether were added gradually to induce anaesthesia. When the lash reflex was abolished, suxamethonium 50 mg was given into an i.v. infusion. The trachea was intubated with a plain endotracheal tube after inflating the lungs with pure oxygen. There were no difficulties with intubation.

An uneventful ovarian cystectomy was performed. Controlled respiration was maintained with nitrous oxide (5 l./min) and oxygen (2 l./min) to which was added a trace of ether. The patient was hyperventilated deliberately.

At the end of the operation spontaneous respiration and consciousness returned quickly. However, the respiration was not as effortless as had been expected. There were no serious abnormalities in arterial pressure or pulse rate when the patient breathed air and she was transferred to her bed and placed in a sitting position.

About 8 hours after the operation the patient was found to be very dyspnoeic and her systolic arterial pressure was only 60 mm Hg. An endotracheal tube was inserted while she was still conscious and respiration was assisted with an oxygen-rich mixture. On more careful examination, the left side of the chest was found to be dull to percussion and no breath sounds could be heard. An emergency X-ray revealed the presence of fluid. About 500 ml of a blood-tinged fluid was removed from the pleural cavity and this procedure completely relieved the respiratory distress. Diuretics, haematinics and a high protein diet provided further relief and she was discharged 10 days after the operation.

DISCUSSION

It is rare for patients to require surgery with such enormous distension of the abdomen. When this patient was referred for preanaesthetic assessment her respiratory distress was considered to be solely the result of the abdominal distension and a routine examination of the chest did not reveal any important abnormality. A preoperative chest X-ray was not ordered because X-ray films are in short supply and the investigation was not thought to be important. If a preoperative X-ray had been taken in this patient, several hours of extreme distress could have been forestalled.

The unsatisfactory relief of respiratory distress at the end of operation was ignored. As the extreme widening of the subcostal angle with the associated changes in the thoracic cage form were still present, it was thought that complete relief of respiratory embarrassment would occur gradually.

Only the sudden increase in respiratory distress forced a further clinical examination of the chest leading to the detection of a pleural effusion which was later confirmed by X-ray.

THE SOCIETY OF ANAESTHETIC LABORATORY TECHNICIANS

The Autumn Scientific and General Meeting of the Society of Anaesthetic Laboratory Technicians will be held on Friday and Saturday, 13 and 14 September, at the Clinical Research Centre, Northwick Park Hospital.

Details of the meeting are available from Miss B. Bird, Division of Anaesthesia, Clinical Research Centre, Northwick Park Hospital, Watford Road, Harrow, Middlesex.