"BLUE DRUM," OR IDIOPATHIC HAEMOTYMPANUM, IN CHILDREN

BY

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Shambaugh (1929) has given a detailed description of a condition which he has named "blue drum," and of which he reports two cases occurring in adults. Fowler (1939) also quotes a case, but the age of the patient is not specified.

In appearance the tympanic membrane is blackish blue over the whole of the pars tensa, which is retracted. The pars flaccida does not share in the discoloration. The landmarks of the drum stand out clearly, and the condition is not associated with any myringitis or bulla formation.

"Blue drum"

Deafness of the conductive type is present. Two instances of "blue drum" have been encountered recently in children, and a summary of the histories may be of some interest.

Two Case Records

Case 1.—This patient, a girl aged 7, had a history of intermittent deafness associated with colds, occasional earache, but no otorrhoea. During the fortnight preceding examination the deafness had become much worse, although there were no local or general signs of an inflammatory condition. Slight tinnitus was complained of. Examination of the right ear showed that the tympanic membrane had an intense blackish-blue appearance, as described above. The landmarks were readily visible, and there was no bulging. Rinne's test was negative for the C to c' forks, and Weber's test showed lateralization to the right. Inflation by catheter revealed some Eustachian tube obstruction, and rales were heard through the auscultation tube. The drum assumed its normal position after inflation, and the colour changed to a dull grey, with brownish patches. (Shambaugh's cases showed no change in colour after politizerization.) The hearing for the whisper improved from 6 inches to 10 feet, normal audibility being 20 feet. The left ear had a retracted membrane, with a little fluid exudate of a clear character in the lower part of the tympanum. There was a conductive deafness of a less degree than that of the right ear, the whisper being heard at 2 feet before inflation and 12 feet after. The tonsils showed some evidence of infection, and there was a moderate adenoid pad.

After an interval of a few days the right drum was in its initial state of "black-blueness," although the hearing had become a little better (whisper, 2 feet). Subsequent inflations by Politzer's method over a period of some weeks resulted in an improvement of the hearing to 10 feet for the whisper, at which standard the hearing acuity remained stationary. The drum always reverted to its previous blue appearance in the intervals. This is in line with Shambaugh's experience of recurrence, although in his cases inflation was preceded by myringotomy.

Removal of the tonsils and adenoids was then carried out, and fourteen days afterwards both drums were normal in appearance and the whisper was audible at 20 feet in each ear. The condition has not recurred in the several months which have elapsed since the operation.

Case 2.—A boy aged 10 was referred for the removal of tonsils and adenoids. Some slight deafness had been noticed

at home. Examination of the right ear showed a typical blue drum, with a fairly high degree of conductive deafness (whisper, 2 feet). The left drum was a little dull and retracted, and the hearing for the whisper was 10 feet. Fourteen days after the removal of the tonsils and adenoids the blueness was found to be confined to the anterior half of the drum and the whisper was audible in the affected ear at 16 feet. One month after the operation the drum was normal, as was the hearing to voice and tuning-fork tests.

Commentary

Shambaugh's cases occurred in individuals over 50 years old. The treatment consisted of myringotomy, followed by inflation, which expelled a chocolate-coloured fluid. The period of relief was only temporary, and recurrence followed. Fowler's case had an effusion into the maxillary antrum on the side of the ear lesion, but the subsequent course of the case is not mentioned.

It would appear that the condition is the result of a "hyperaemia ex vacuo," consequent on Eustachian tube obstruction. The reported cases recovered readily and completely after the removal of the primary cause of the Eustachian block.

REFERENCES

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Shambaugh, G. E. (1929). *Arch. Otolaryng.*, 10, 238.

Medical Memoranda

Lung Collapse after Eye Operation under Local Anaesthesia

It is thought worth while recording this case, as a search of the literature failed to reveal a similar one. It is well known that collapse of the lung, both massive and partial, follows all types of surgery, occurring in about 0.3% of all operations, and that various reasons have been assigned for this. It seems certain, however, that it is not entirely due to the irritant effect of inhalation anaesthesia, causing a mucous secretion which, by becoming inspissated, finally blocks a bronchus. There are still many cases of this complication following operations with regional block local anaesthesia, although they are only about one-tenth as frequent. This compares favourably with spinal anaesthesia, in which, as regards abdominal cases at least, collapse is as common as with inhalation. In the following case the only explanation as to causation that can be suggested is that patients with glaucoma are nursed upright after operation and instructed at all costs to avoid coughing. This would tend to allow any mucus to gravitate towards the lower lobes and to accumulate there.

CASE REPORT

A spinster aged 65 was trephined by Mr. Tait of Windsor for a chronic glaucoma on December 23, the anaesthetic being a simple instillation of a few drops of 1% pantocain into the right eye. The local and general condition made satisfactory progress until January 1, when there was a sudden onset of dyspnoea, with pain in the right lower chest. I was asked to see her, and found signs suggestive of partial collapse of the right middle and lower lobes. Although there were no constitutional disturbances suggestive of lobar pneumonia she was given a short course of sulphapyridine, 7 grammes in all. Within a further twenty-four hours there was a complete collapse of the two lobes, as shown by the absence of the respiratory murmur, and a temperature of 100.2°. Postural drainage and bronchoscopy were both contraindicated by reason of her eye condition, so inhalation of carbon dioxide was tried, and although after one period of hyperpnoea crepitations were heard over the affected area the condition remained quite stationary.

By January 6 the patient was feeling fit enough to travel by car to spend a few days in a convalescent home. A radiograph taken on January 7 showed the typical appearance of collapse. She then rested a fortnight, with some pain at the right base for the first few days and with some dyspnoea on exertion. During this time large doses of ammonium carbonate were given

by mouth by her own doctor, and when she was seen on March 6 the condition, as judged by physical examination of the chest, had completely cleared.

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Treatment of Post-anal Dermoids

It has been found difficult to ensure healing by first intention in wounds following radical excision of post-anal dermoids. Adipose tissue in this region is particularly unsuitable for dealing with post-operative collections of blood and exudate and in maintaining a clean field for healing.

By exposing muscle in the floor of the wound it was hoped that drainage and other factors which influence healing would work to better advantage. The fascia covering the sacral and coccygeal origins of the glutei maximi is exposed by wide excision of the dermoid region, and a piece of the fascia about the size of a halfpenny is easily removed from one or both sides (see Fig.). This was done in 4 consecutive cases of excision of

infected post-anal dermoids, with closure and healing by first intention. All 4 patients were women: 2 had had exacerbations of swelling and pain within the two weeks preceding operation, and 2 had had previous incisions. All have remained healed for from six weeks to seven months after operation.

Apart from excision of the fascia the operative technique was essentially as that described by W. B. Gabriel (1937). Haemostasis was obtained by pressure and a few fine catgut ligatures. Dead space was reduced by deep silkworm-gut sutures tied over a roll of gauze. The patients were nursed on their side in bed.

Final conclusions cannot be drawn from so small a series. However, the principle of including healthy muscle in the healing process has not done any harm and may be worthy of extensive trial in suitable cases.

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Gabriel, W. B. (1937). *Principles and Practice of Rectal Surgery*, London.

Appendix Strangulated in Congenital Hernial Sac in an Infant

The following case may be of interest in view of the age of the patient, the nature of the contents of the hernial sac, and the fact that, though the hernia was of eight hours' duration only, operation showed that it would not have been wise, and hardly possible, to reduce it by taxis.

A baby aged 5 weeks, suffering from convulsions, was under the care of Dr. Mackay at the Queen's Hospital for Children, London, E., when he suddenly developed a swelling in the right inguinal region and scrotum. This, when examined eight hours later, was found to be a scrotal hernia. The scrotum was red, inflamed, and oedematous. The temperature was 99° F., pulse 132. The child vomited once during examination. The bowels had not moved since the appearance of the hernia. An attempt at taxis being unsuccessful, operation was undertaken.

Local anaesthetic 1% novocain was employed and the sac exposed by the usual incision. It was bluish black in colour, and when opened dark fluid poured out. The vermiform appendix, stretching from the internal abdominal ring to the scrotum, was

now seen as the hernial content. It was gangrenous throughout and adherent to the sac posteriorly. The constricting agent was the internal abdominal ring. This was enlarged by dividing it in an upward and outward direction. The caecum now presented and it was seen that the constriction occurred exactly at the junction of the appendix and caecum.

The appendix was amputated, but the sac, being inflamed and adherent, was not further interfered with. Two catgut sutures were used to unite the divided internal oblique and transversalis muscles; the mouth of the sac was closed at the internal abdominal ring with a few sutures, and the internal oblique edges united with continuous catgut. The skin edges were coapted with interrupted "kalmerid" suture. The lower end of the wound was drained with a dozen strands of silk.

The baby made an uninterrupted recovery: the skin sutures were removed on the eighth day, and the wound was completely healed in ten days.

I have to thank Dr. Mackay for permission to publish this case.

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Observation of Malaria Parasites in Fresh Blood Films

When fresh blood is sealed beneath a cover-slip changes occur which are not obtainable when blood is smeared directly it is shed. In some cases of malaria one of these changes is the engulfing of a malaria parasite by an amoeboid white cell. Such a process is often seen in a fresh film in which crescents abound in the blood stream. If this process be allowed partly to occur and then stained the resulting change should be demonstrable.

A fresh film was made, and after three to five minutes the cover-slip was slid away from the slide. Apart from many picturesque forms it was evident that the hoped-for result was achieved, for a "crescent," now in spheroidal form, was actually in contact with a white cell, into which had passed some of the granules of the crescent.

The crescent was stained blue with cobwebby protoplasm, the granules, 32 in number, being black. The white cell had a single lobed palette-like deep purple nucleus, its protoplasm being pink and cobwebby; in it were eight or nine granules, similar in form and colour to those in the crescent. Between the blue protoplasm of the crescent and the pink protoplasm of the leucocyte there was no demarcating border. It looked as if the white cell's meal was severely distending its outline.

When a crescent is approached by a leucocyte in the living blood it is apt, as if under sentence of death, to perform the most intense gyroscopic movements, its black granules being centrifugalized at a great pace. This revolving globe only half fills its red cell.

A similar object was obtained in the stained film after a five-minute life under the cover-slip. A ring of black rods, smaller than a red cell and corresponding to the globe mentioned above, was arranged circumferentially like a ringlet of hair. Inside it and not completely filling it was a purplish-blue cobwebby mass, while outside the ring there was a splash of blue which with its streaky short circular lines seemed to have been put into some sort of rotary movement by the gyroscopic globe it contained. It looked then as if one of these rotating bodies had been caught at a lucky moment.

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P. Cohen, M. Weichsel, M. and J. H. Lapin (*J. Pediat.*, 1940, 16, 30) record their observations on 432 whooping-cough patients treated with various therapeutic agents. Vaccine treatment, which consisted of Krueger's vaccine, Sauer's vaccine, toxin vaccine, or Bordet vaccine, did not improve the symptoms, but was even associated with attacks which were severer than those of the 80 controls. The results obtained with nasal topagen (soluble protein of *H. pertussis* in normal saline) and topagen hypodermically did not differ from those of the controls. Patients treated with convalescent serum and hyper-immune serum had fewer coughing spells, a shorter period of illness, and greater freedom from complications, but only when the serum was injected before the paroxysmal stage.