Medical Memoranda

Essential Hypercholesterolaemic Xanthomatosis

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Essential hypercholesterolaemic xanthomatosis is characterized by a raised blood cholesterol and the deposition of cholesterol and lipids in the skin and tendons in the form of xanthomata (Thannhauser, 1958). It is usually familial (Wilkinson *et al.*, 1948; Leonard, 1956; Jepson, 1961), but patients are occasionally seen who have no family history of the disease.

The disease is associated with the early development of atherosclerosis and ischaemic heart disease (Fox, 1879; Poensgen, 1883; Barr *et al.*, 1954), and any therapy that will reduce the blood cholesterol and lipids may theoretically prevent or postpone them.

Jepson (1961) showed that long-term treatment by means of a corn-oil diet was practicable and effective, and therapeutic agents have included oestrogens (Oliver and Boyd, 1954), sitosterol (Leonard, 1956), nicotinic acid (Galbraith *et al.*, 1959), triparanol (Hollander *et al.*, 1960), and sodium-D-thyroxine (Greene *et al.*, 1961; Roper, 1963; Jepson, 1963). At a recent symposium in Buxton (1963) Atromid, a combination of ethyl- α -*p*-chlorophenoxyisobutyrate and androsterone, given orally, was said to reduce blood-lipid levels with minimal side-effects,

transient gastro-intestinal disturbances occurring in about 20% of patients. Its use is described in two patients with xanthomatosis.

CASE REPORTS

Case 1.—A 30-year-old draughtsman was first seen in 1959 with large xanthomata on hands, elbows, buttocks, and right knee, which had been present for six years. There were no other complaints and no member of his family was similarly affected. Physical examination was otherwise normal, but the serum cholesterol was 306 mg./100 ml. The serum was not turbid. Various regimens of treatment were tried during the next three years, including a low-cholesterol diet, triparanol, Lipostabil (containing lecithins of soya bean), maize-oil supplements, and up to 5 g. nicotinic acid daily. Cholesterol levels during this time ranged from 230 to 650 mg./100 ml., normal values being recorded only while he was on large doses of nicotinic acid. However, no treatment had the slightest effect on the xanthomata (Fig. 1). In December 1962 he was started on Atromid (clofibrate) 0.5 g. t.d.s. For the first time in four years there was a change in the xanthomata, which began to regress, and after eight months had almost disappeared (Fig. 2); in spite of this the serum cholesterol remained elevated (346 mg./100 ml.). In January 1964, however, his serum cholesterol had fallen to 175 mg./100 ml. No side-effects from the drug have been observed.

Case 2.—A 34-year-old male truck driver was first seen in October 1962 with xanthomata of both elbows (Fig. 3) which had been present for two years. Again there was no family history and no other abnormal physical signs were found. The serum cholesterol

FIG. 1.—Case 1. Photograph taken on 18 December 1962.

FIG. 3.—Case 2. Photograph taken on 18 December 1962.

FIG. 2.—Case 1. Photograph taken on 9 August 1963, after eight months' treatment with Atromid.

FIG. 4.—Case 2. Photograph taken on 21 January 1964, after one year's treatment with Atromid.

was 429 mg./100 ml., with no serum turbidity. The patient was placed on a low-cholesterol diet together with maize-oil supplements, and a month later was started on Atromid 0.5 g. t.d.s. The lesions began to regress, and by January 1964 had almost disappeared (Fig. 4). Cholesterol values during this time, however, remained elevated (260–358 mg./100 ml.). Once again, no side-effects were observed.

COMMENT

Disappearance of xanthomatous deposits from the skin makes one hopeful that similar deposits in the arterial wall may regress and that atheroma may be prevented or postponed. Up to the present the best therapy has probably been the replacement of the normal dietary fats by an unsaturated fat, corn oil (Jepson, 1961). In his series regression of xanthoma tuberosum was seen in six of nine patients, and of xanthoma tendinosum in seven of 12 patients. Significant depression of blood cholesterol, phospholipids, and plasma turbidity was also obtained.

Corn-oil foods are, however, expensive and there is a danger that this regimen, which must presumably be lifelong, may be abandoned. It is possible that therapy with Atromid is equally or more effective; it can be carried out without dietary restriction and is simple and safe. Xanthomata underwent remarkable regression in our two patients, and in Harrison and Goldberg's patient (1963), but were unaffected in the seven patients treated by Jepson and James (1963). It is clear, therefore, that further trials are needed.

Acute Inversion of the Urinary Bladder in Labour

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Rarely does the urinary bladder invert during labour. We have found only two cases reported (Mahfouz, 1938; Heyns, 1941). In each the bladder protruded through the urethra as a pyriform mass outside the vulva similar to an inverted uterus. We report here another case.

CASE REPORT

On 9 January 1963 a young Bantu woman delivered her fifth baby at her kraal just before sunrise. She expelled the placenta shortly afterwards and then rested. While resting she again had bearing-down pains and in responding to them felt something come out below her pubis. She and her baby, which weighed 7 lb. (3.2 kg.), came to hospital that evening. There was a dark red, pyriform mass about 3 in. (7.5 cm.) wide and 4 to 5 in. (10 to 12.5 cm.) long protruding from the vulva. It looked like an inverted uterus and we gave the patient intravenous sodium thiopentone in preparation for its reduction.

When the patient was asleep we saw that the mass protruded through a dilated urethra. The outer surface was mucosa, cyanotic and oedematous. Its pedicle at the urethral orifice was about 2 in. (5 cm.) thick. Posterior to the pedicle a finger could be inserted $\frac{1}{2}$ in. (1.3 cm.) with pressure. This caused the expulsion of 1 to 2 oz. (28 to 57 g.) of urine. There was no space anterior to the pedicle, suggesting that the inversion consisted largely of the anterior wall and superior surface of the urinary bladder.

We injected hyaluronidase into the mass at several points and were able to reduce its bulk significantly by manual compression. Even then we could not replace the bladder through the dilated but intact sphincter. We continued to force the mass until the sphincter ruptured and a tear extended up the urethra and 2 to 3 in. (5 to 7 cm.) along the anterior wall of the vagina. Then the mass was replaced.

I wish to thank Dr. A. Paton for his advice, and Messrs. E. A. Prior and J. G. Williamson for the photographs. I am grateful to the Pharmaceuticals Division of Imperial Chemical Industries Limited for generous supplies of Atromid.

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Dr. T. E. Mangum, of Nampa, Idaho, was then visiting Acornhoek and kindly assisted in the case. He repaired the rupture with light chromic catgut and closed the wound, including the sphincter, in three layers. An indwelling catheter was inserted. Penicillin, streptomycin, and a triple sulphonamide were given for the next seven days. The highest temperature was 99.4° F. (37.4° C.) on the fourth post-operative day. The catheter was removed on the twentieth day after operation and the patient voided 34 oz. (966 ml.) a few hours later. Two nights later the patient reported slight incontinence during sleep. Otherwise she seemed to have normal control of micturition and was discharged four days after removal of the catheter. We asked her to come back for further examination, possibly a cystoscopy, but have not seen her since.

COMMENT

Inversion of the urinary bladder through the urethra occurs infrequently. Klausner (1922) recognized four groups: (1) inversion of a diverticulum of the bladder, (2) inversion only of the bladder mucosa, (3) partial inversion of all layers of the bladder wall, and (4) total inversion of the whole viscus. Heyns (1941) was able to collect 40 cases from the literature up to 1941. Most of these were newborn infants, children, and young women. The inversion is usually chronic and often associated with coughing or some other form of straining. In contrast, the present case and the one Heyns (1941) reported occurred unexpectedly and during labour. They are properly called acute inversions of the bladder.

A third case occurred in Egypt, also during labour (Mahfouz, 1938). An analysis of the three cases reveals many similarities. In all three the labour was otherwise normal. Two occurred in multiparous women, one delivering her fourth child (Heyns, 1941) and the present case her fifth. In the third the parity is not given (Mahfouz, 1938). In all three the urethral sphincters were torn: in two during replacement and in one the exact time of rupture is not given (Mahfouz, 1938). In one case the bladder inverted during expulsion of the placenta (Heyns, 1941), in the present case just afterwards, and in the third we are told only that it occurred during labour (Mahfouz, 1938).