

COMMENT

Since King and Shumacker (1952) drew attention to the possible association of splenectomy with susceptibility to infections several reports have suggested an increased incidence of bacterial infections after splenectomy (Smith *et al.*, 1957, 1962; Lowdon *et al.*, 1962; Cook *et al.*, 1963). These studies refer to cases of splenectomy performed mainly because of varying haematological conditions (King and Shumacker, 1952; Smith *et al.*, 1957, 1962; Lowdon *et al.*, 1962), but also because of traumatic rupture (Smith *et al.*, 1962) and of "cryptogenetic splenomegaly" (Cook *et al.*, 1963). Waterhouse-Friderichsen syndrome associated with pneumococcal septicaemia is found with striking frequency in these reports. In a case of recurrent Waterhouse-Friderichsen syndrome due to streptococcal pneumonia congenital absence of the spleen was found at necropsy (Myerson and Koelle, 1956).

On the other hand, there are follow-up studies of children who had splenectomies performed for medical reasons or for traumatic rupture of the spleen in which no increased incidence of infection was found (Laski and MacMillan, 1959; Broberger *et al.*, 1960; Thurman, 1963).

Human studies (Broberger *et al.*, 1960; Thurman, 1963) and animal experiments (Fitch and Winebright, 1962; Winebright and Fitch, 1962) have failed to show impairment in antibody formation resulting from splenectomy, with the exception of impairment of red-cell agglutinin formation.

It may be, however, that the post-splenectomy susceptibility to infection is related to the removal of a large part of the phagocytic site of the body.

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Post-traumatic Aneurysm of the Radial Artery at the Wrist

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Aneurysms of peripheral arteries are either true or false, the distinction being based on the histological structure of the wall of the aneurysm. The true aneurysm has all three coats of intima, media, and adventitia, while the false aneurysm has a pseudointima lining a fibrous sac. Both types of aneurysm may result from trauma. After an episode of severe blunt trauma or repetitive milder trauma a segment of arterial wall undergoes some degree of necrosis with loss of elastic recoil and slowly dilates, forming a typical true aneurysm. More often, trauma results in partial or total transection of an artery with formation of a haematoma which later becomes recanalized in continuity with the arterial lumen, so forming a typical false aneurysm when it begins to pulsate (Calem, 1963).

Post-traumatic aneurysms have been observed in relation to many peripheral arteries—femoral, popliteal, and tibial in the lower limbs; splenic, renal, and mesenteric in the abdomen; facial and carotids in the head. The arteries of the palm have often been similarly affected (Middleton, 1933; Lloyd, 1957; Spittel, 1958; Smith, 1962), but such aneurysms are rare in the wrist, and when seen are more often in relation to the ulnar artery and its branches than the radial artery. The case reported here illustrates this rare development after a relatively common injury to the wrist.

CASE REPORT

An electrician aged 22 caught his left hand in a machine and sustained a transverse laceration across the dorsum and radial border of his left wrist, which bled profusely. Immediate treatment by the emergency medical officer consisted of haemostasis by ligature

of bleeding-points, wound toilet, and skin suture; it was recorded that there was complete severance of the abductor and both extensor tendons of the left thumb. Wound sepsis developed, and healing was delayed for three weeks. Eight weeks after the accident he was admitted for repair of the severed tendons; this was carried out with linen through a curvilinear incision at a right angle to the original scar. He made a good recovery, and the repaired tendons functioned well.

Twelve weeks postoperatively (20 weeks after the accident) a pulsating swelling 1 cm. in diameter was noticed at the anterior end of the original scar just distal to the palpable radial pulse (Fig. 1); the pulsation of the swelling was synchronous with the radial pulse, and disappeared with pressure on the radial artery proximally. It was observed for four months, during which time the size of the pulsatile swelling remained the same and the patient did not develop any other symptoms. He was then admitted and the swelling was explored. The finding was an aneurysmal sac about 1.5 by 1 cm. in diameter, involving two communicating arteries to the radial



FIG. 1.—Showing the pulsating swelling.

artery (Fig. 2). On excision the aneurysm was found to be a fibrous sac lined by pale laminated blood clot. The feeder vessels were ligated, and the sac was excised. Postoperative progress was uneventful, and he made a full recovery.

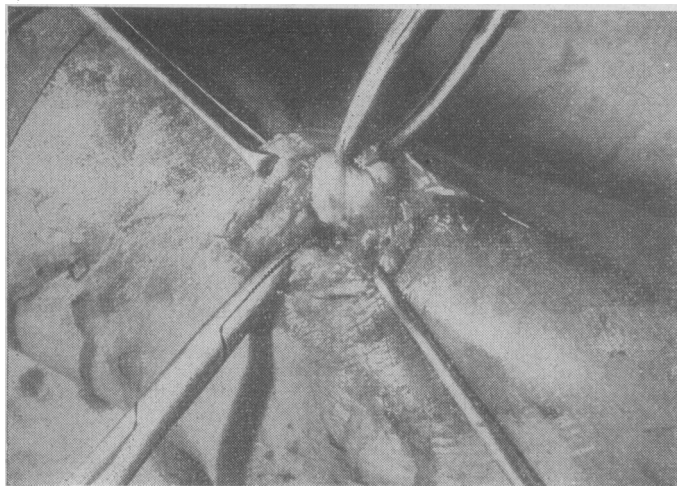


FIG. 2.—Showing the aneurysmal sac.

COMMENT

Most of the reported cases of aneurysm of the hand and wrist occurred in the ulnar artery and its branches rather than the radial. In everyday life the ulnar border of the wrist is subjected to trauma more often than the radial border, and this may account for the difference in incidence of post-traumatic aneurysms.

The radial artery in its terminal course lies deep to the abductor longus and extensors longus and brevis tendons of the

thumb in the anatomical snuff-box, but occasionally it lies superficial to these tendons (Gray's *Anatomy*, 1946). In such an abnormal anatomical disposition the radial artery would be more liable to injury, with consequent likelihood of aneurysm formation.

Albright and Van Hale (1946) suggested that complete transection of an artery is not compatible with aneurysm formation because of the contractile power of the artery, which goes into spasm to obliterate its lumen completely; they said that a severed artery that is ligated may later form an aneurysm. In the above case there were two branches of the radial artery apparently divided at the accident, and later ligated in the initial treatment; the subsequent wound sepsis predisposed to reopening of these vessels with bleeding and haematoma formation, and later recanalization converted this into an aneurysm. At the Royal Orthopaedic Hospital, Igbobi, like any other large centre for the treatment of accidents, lacerations of the wrist with severance of the abductor and extensor tendons of the thumb sustained accidentally in the home or at work, or with homicidal intent, are often treated. It is therefore surprising that post-traumatic aneurysm of the radial artery (or its branches) at the wrist is not seen more often.

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Hair Loss in Patients Treated with Carbimazole

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Carbimazole was introduced as an antithyroid drug by Lawson *et al.* (1951). Since then it has been used extensively in the treatment of thyrotoxicosis, especially in Great Britain and in Europe (Wayne *et al.*, 1964). In the United States of America methimazole, a closely related compound, is favoured, and carbimazole differs from it only by the addition of a carboxy group. The overall incidence of side-effects with carbimazole is low, varying from 3.5 to 10% (Trotter, 1962). Minor side-effects include skin rashes, pruritus, and nausea, while blood dyscrasias are fortunately rare. Loss of hair has not previously been reported as a complication of carbimazole therapy, but the cases of six patients who developed loss of hair after treatment with thiouracil and its derivatives have been described (Lundbæk, 1946; Levy, 1950; Wilburne, 1951). We felt it of interest, therefore, to report the cases of five patients who complained of loss of scalp hair while receiving carbimazole, all seen at the Endocrine Clinic of the Western Infirmary, Glasgow, within one year. Prior to treatment with carbimazole the diagnosis of thyrotoxicosis had been confirmed in every case by radioiodine tests and estimation of the serum protein-bound iodine.

CASE REPORTS

Case 1.—A woman aged 41 was first treated with carbimazole 30 mg./day in July 1963. After 10 weeks she was thought to be euthyroid, and the dose of carbimazole was reduced to 15 mg./day and thyroxine 0.3 mg./day was added. Two months later she complained of diffuse loss of scalp hair. At this time she was euthyroid. There was no evidence of loss of hair elsewhere on her body. Potassium perchlorate 500 mg./day was substituted for the carbimazole, and thyroxine was continued as before. One month later her hair appeared normal. Therapy was discontinued in December 1964. In May 1965 symptoms of thyrotoxicosis recurred, and relapse was confirmed by a raised serum P.B.I. and a high absolute iodine uptake by the thyroid gland. Carbimazole 30 mg./day was again started. One month later she complained of nausea and loss of scalp hair. This was sufficiently disturbing to make her reluctant to leave her house without a covering over her head. Carbimazole was discontinued and she was treated with 6 mCi of radioiodine. Two months later her hair had returned to normal.

Case 2.—A woman aged 37 was treated initially with carbimazole 60 mg./day, starting in August 1964. After two weeks this was reduced to 40 mg./day, and after a further two weeks to 30 mg./day, and thyroxine 0.3 mg./day was added. In January 1965 she complained of diffuse loss of hair confined to the scalp. Carbimazole was discontinued and methylthiouracil 300 mg./day was substituted. Thyroxine 0.3 mg./day was continued as before. After this no further hair was lost and her hair again grew normally.

Case 3.—A woman aged 34 was first treated with carbimazole 30 mg./day in December 1964. Thyroxine 0.3 mg./day was added in February 1965. In April 1965 she complained of diffuse loss