MILROYS DISEASE WITH NEPHROTIC SYNDROME

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Summary

A family with Milroys disease in 3 members and nephrotic syndrome in two siblings is described. The association is reported for the first time. Literature is briefly reviewed.

A family with 3 members having Milroys disease, two of whom subsequently developed nephrotic syndrome is reported.

Case No. 1

13 year old girl presented with swelling of both legs in March, 1967. (Fig. Page No. 92). This swelling developed soon after her birth and did not extend above knees. Examination revealed edema of both legs upto knees, which was pitting only slightly and there was puffiness of face. Blood pressure was 110/70mm Hg. Systemic examination did not reveal any abnormality. Investigations revealed Hb. 12 gms%, TLC 5,600 with poly. 60%, Lympho. 38% and Eosino. 2%. Urine examination revealed a 3 plus albuminuria with a total 24 hour excretion as 3.5 gms%. Serum proteins were 4.2 gms% with alb. 2 gms% and glob. 2.2 gms.%. Serum cholesterol was 360 mg%. Blood urea was 20 mg%. Skin biopsy showed that the epidermis was slightly atrophic. Dermis and subcutaneous tissue showed interstitial edema. There was an increase in the collagen tissue in dermis. The capillaries and lymphatics were increased and dilated with some lymphocytic infiltration. Lymphangiography was attempted twice but the dye did not go up into the lymphatics. Kidney biopsy was attempted twice without success. A third attempt was refused by the patient.

The patient was put on diuretics which produced good diuresis but the swelling of the legs has persisted. During the follow-up period uptill now she had several attacks of cellulitis in either or both legs, albuminuria has persisted, blood urea has been normal and serum cholesterol remained at the initial high level. This non-pitting oedema has never shown regression at any time.

Case No. 2

17 year old girl and an elder sister of case No. 1 was first seen in July, 1967 with swelling of both legs below knees which had been present right from her childhood. (Fig. Page No. 92). Examination revealed in an otherwise healthy patient edema of both legs below the knee which was non-pitting. Repeated urine examination did not reveal any abnormality. Serum proteins, serum cholesterol and blood urea were normal. Lymphangiography was attempted twice but the dye did not go up into the lymphatics. Skin biopsy

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showed that the Epidermis was atrophic. Dermis and Subcutaneous tissue were edematous, with an increase in the collagen tissue. Capillaries and lymphatics were dilated.

During one and a half years follow-up the patient had 3–4 attacks of cellulitis of legs which responded well to antibiotics and also subsided without treatment twice. In January, 1969 she came with a history of oliguria and the limbs developed some pitting edema also. Urine examination at this time revealed massive albuminuria with a total 4.5 gms of albumin excretion in 24 hours of urine. Serum cholesterol was 280 mg% and serum protein 4.5 gm% with albumin 1.7 gms% and globulin 2.8 gms%. Kidney biopsy showed a membrano-proliferative glomerulonephritis.

During her subsequent follow-up she continued to have albuminuria only its amount varying from time to time.

Case No. 3

Aged 40 years and a paternal aunt of the cases No. 1 and 2 was seen first in 1969. Examination revealed a well built lady, having a swelling of lower limbs below knees ever since her childhood. She had a hypertension of 180/110 mm Hg. Systemic examination was normal. Routine blood and urine examination, serum proteins and serum cholesterol were normal.

The cause of lymphoedema in all these patients could not be ascertained. The fact that the filarial infection is nearly unknown in the valley and that the non-pitting type of edema occurring in several members of this family right from early childhood led us to the diagnosis of chronic hereditary lymphedema (Milroy's disease) in them. One of the patients had nephrotic syndrome at the time of her first presentation and the other developed it nearly a year and a half later. We have not been able to locate the disease in any other family members.

Comments

Milroys disease is a non-inflamatory lymphedema that usually involves one or both lower extremities and is both congenital and familial. It is inherited as a dominant disorder[1]. The other varieties of primary lymphedema i.e. lymphedema praecox and tarda have not been specially subdivided with the familial and the nonfamilial types[2]. Milroy[3] described the entity among 22 members in 6 generations of a family in 1892 but unknown to him. Nonne[4] had described 4 cases of congenital hereditary elephantiasis in a family traced through 4 generations in 1891. More cases have subsequently appeared in the literature[5,6]. Many associations of this disease have been described, as with yellow nails[7,8,9,10], with pleural effusion[2,11,12], with pleural effusion and yellow nails together and with thyroid disease and bronchiectasis[2]. Association with nephrotic syndrome to our knowledge has not been reported so far.

Even nephrotic syndrome itself in siblings is a rare event[13]. Such syndrome in two or more siblings has been reported[14,15,16,17]. This familial syndrome has recently been shown to have an autosomal recessive mode of inheritance[18]. Though we have no proof of any hereditary transmission of the nephrotic syndrome in these two siblings and it could be a chance occurrence secondary to repeated streptococcal infections, the hereditary factor however, could not be ruled out. Their paternal aunt who too has lymphoedema has not shown any albuminuria so far even after a follow-up of 6 years.

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