

Obstetrical and gynaecological problems in primary Sjögren's syndrome

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Primary Sjögren's syndrome (SS) is a chronic autoimmune systemic disease that affects nine females for every one male patient. The disease affects all the exocrine glands including the glands in the uterine cervix and Bartholin's glands. Primary SS and secondary SS can be diagnosed at all ages, even during childhood, but most often the patients are middle aged.

Fertility

Many of the autoimmune diseases have a great and often bad influence on the fertility/fecundity of female patients. This is especially true in systemic lupus erythematosus (SLE) (review (1)) as these patients have a greater risk of spontaneous abortions, premature deliveries, and foetal death than normal women (2,3,4,5). Furthermore, the pregnancy may induce flares in the SLE activity and may increase the risk of kidney failure (6,7). In primary SS patients this is not the case (8,9).

Obstetric

Although the frequency of spontaneous abortions, premature deliveries, and perinatal deaths were the same in women with primary SS as in the general population, there might be some problems during pregnancy and delivery in women with primary SS (8,9). In foetuses of mothers with primary SS there is an increased (one in 40) incidence of congenital complete heart block (CCHB) (8,9). In the normal population the frequency of CCHB is only one in 20,000 deliveries (10). This results in a relative risk of 500 in foetuses born to mothers with primary SS to develop CCHB. The occurrence of CCHB is related to the presence (11,12,13) and level (14) of anti SS-A and/or anti SS-B antibodies in the blood of the mother. But not all babies of mothers with these antibodies develop CCHB. In our department a woman pregnant with twins was diagnosed with primary SS, because obstetricians diagnosed CCHB in only one of the 20-week-old foetuses (personal observation). The mother had no subjective symptoms of SS, but fulfilled all the Copenhagen classification criteria that are required for a diagnosis of primary SS (15).

The diagnosis of CCHB in a foetus is often suspected already during pregnancy due to the low heart rate (60-80) of the foetus. The condition can be proven with a foetal electrocardiogram. In Malmö and Copenhagen, we recommend that these babies be delivered in a department where it is possible to receive assistance from a neonatal cardiologist in case the baby should need insertion of a pacemaker. During pregnancy it is possible, by ultrasound scanning for hydrops foetalis, to investigate if the foetus develops cardiac failure. If the foetus does not have cardiac incompetence there is no indication for a planned Caesarean section, although there will be some difficulties in monitoring the foetus for signs of asphyxia with cardiotocography (CTG). As low heart rate usually is a sign of threatening asphyxia in the foetus, the wellbeing during labour of these foetuses must be confirmed after rupture of the membranes by analysing the pH in blood samples from the capillaries of the head or bullock of the unborn baby.

Gynaecology

Premenopausal problems. Before menopause it is vaginal dryness that causes most of the gynaecological problems that are specific in patients with SS.

There are no exocrine glands in the vagina. The vaginal secretions originate from transudation through the epithelial cells in the vaginal wall and consist of tissue fluids, epithelial debris, electrolytes, proteins, and lactic acid. The latter originates from the breakdown of glycogen by the

Döderlein bacillus, which is a normal inhabitant of the vagina. The vaginal "secretion" mixes with the cervical mucus, the production of which varies during the different phases of the menstrual cycle. In SS patients, the amount of vaginal "secretion" and cervical mucus is relatively sparse leading to such symptoms as pain during and pain and/or bleeding after sexual intercourse, itching, irritation and soreness of the vagina and vulva. These symptoms can be rather disabling not only to the patient, but also to their family life. This dryness might be improved with the same systemic treatments that are prescribed for the eye and mouth dryness. However, the vaginal dryness is often better relieved with vaginal lubricants. There are a number of over-the-counter gels and ointments available, varying from country to country. It is very difficult to know which gel or ointment to prescribe for the individual patient, and in fact even in the same patient it might differ from time to time, as to which preparation gives the best relief. Unfortunately, the perfect lubricant that suits all women at all times has still to be found!

Perimenopausal problems. Because the majority of patients with Sjögren's syndrome are diagnosed with several years delay and quite often in their middle age, they often present a rather confusing picture to doctors. In this age group some of the symptoms of dryness are due to the decrease in oestrogen and/or the increase in gonadotropic hormones. However, in women with severe symptoms of hot flushes and sweating, these problems might completely overshadow the problem of dryness. The gynaecologist will often prescribe hormone replacement therapy (HRT) to minimise or alleviate the hot flushes and the sweating. This treatment will of course remove dryness caused by lack of estrogens as well, but NOT the dryness caused by malfunction of the exocrine glands as a result of SS. The failure to cure this dryness may cause concern for the woman and her gynaecologist, and few women will even be thinking of complaining about their dry eyes and their dry mouth to the gynaecologist. Tiredness is common in SS and this symptom is well known to be rather common in the menopause as well. So this will not enhance the suspicion that some of the so-called menopausal symptoms can be caused by a co-existing SS.

Primary SS *per se* is no reason to avoid estrogens if this treatment is otherwise indicated and without contraindications. Why add the dryness caused by the lack of estrogens to the dryness due to SS? However, if vaginal dryness is the predominant symptom in a 50 year old woman who still has her regular periods, there is absolutely no reason to believe that estrogens will improve her general wellbeing, because her hormone levels will be within normal limits. Otherwise, some irregularity of the menstrual cycle would be expected.

References

1. Petri M. Pregnancy in SLE. *Clinical Rheum* 1998; 12: 449-476.
2. Donaldson LB, de Alvarez RR. Further observations on lupus erythematosus associated with pregnancy. *Am J Obst Gynec* 1962; 83: 1461-71.
3. McGee CD, Makowski EL. Systemic lupus erythematosus in pregnancy. *Am J Obst Gynec* 1970; 107: 1008-12.
4. Fraga A, Mintz G, Orozco JH. Sterility and fertility rates, fetal wastage and maternal morbidity in systemic lupus erythematosus. *J Rheum* 1974; 1: 293-8.
5. Valesini G, Carsetti R, Patricelli S et al. Autoimmunity and abortion. In *Sereno Symposium No 45, Immunological factors in human reproduction*. Ed Shulman S, Dondero F, Nicotra M. Academic Press, London and New York. 1982; 235-40.
6. Petri M, Howard D, Repke J. Frequency of lupus flare in pregnancy. The Hopkins Lupus Pregnancy Center experience. *Arthritis Rheum* 1991; 34: 1538-45.
7. Lê Thi Huong D, Wechsler B, Vauthier-Brouzes D et al. Outcome of planned pregnancies in systemic lupus erythematosus: A prospective study on 62 pregnancies. *Br J Rheum* 1997; 36: 772-77.
8. Manthorpe T, Manthorpe R. The outcome of pregnancies of patients with primary Sjögren's syndrome. *Progress in Rheumatol* 1984; ii: 141-4.
9. Manthorpe T, Manthorpe R. Congenital complete heart block in children of mothers with primary Sjögren's syndrome. *Lancet* 1992; 340: 1359-60.

10. Michaëlsson M, Engle MA. Congenital complete heart block. An international study of the natural history. In *Pediatric cardiology*, ed Engle MA. 1972; 4: 85-101. In the series *Cardiovascular Clinics*, ed Brest AN. Philadelphia. FA Davis Co.
11. Scott JS, Maddison PJ, Taylor PV et al. Connective-tissue disease, antibodies to ribonucleo-protein, and congenital heart block. *N Engl J Med* 1983; 309: 209-12.
12. Ramsey-Goldman R, Hom D, Deng J-S et al. Anti SS-A antibodies and fetal outcome in maternal systemic lupus erythematosus. *Arthritis Rheum* 1986; 29: 1269-73.
13. Julkunen H, Kurki P, Kaaja R et al. Isolated congenital heart block. Long-term outcome of mothers and characterization of the immune response to SS-A/Ro and to SS-B/La. *Arthritis Rheum* 1993; 36: 1588-98.
14. Horsfall AC, Neu E, Forrest G et al. Maternal autoantibodies and congenital heart block: clues from two consecutive pregnancies, one in which there was congenital complete heart block and one in which the fetus was healthy. *Arthritis Rheum* 1998; 41: 2079-80.
15. Manthorpe R, Oxholm P, Prause JU et al. The Copenhagen criteria for Sjögren's syndrome. *Scand J Rheumatol* 1986; 61(suppl): 19-21.