THE INCIDENCE OF GONORRHEA IN AN ABORTION POPULATION

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ABSTRACT

The incidence of gonorrhea was investigated in an abortion population. A total of 1021 women participated in this study. Three asymptomatic cases of gonorrhea were detected. None of these women had had gonorrhea before or had a previous abortion. No relation was found between the incidence of gonorrhea and age. The abortion population in our community cannot be considered to be a high-risk group for gonorrhea. In our opinion, this low incidence neither justifies routine gonococcal culture nor the prophylactic use of antibiotics in the abortion population.

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INTRODUCTION

Gonorrhea presently is one of the most frequently observed infectious diseases. Ascending gonorrheal infection in women in some cases may lead to a permanent sterility. This fact is extremely important to the population seeking abortion because they may want to become pregnant in the future. It therefore seemed important to us to find out whether the abortion-seeking population forms a high-risk group with respect to gonorrheal infection.

MATERIAL AND METHODS

The study took place during the period April 6th - September 1st 1978. Due to the capacity of the laboratory, only those patients who had an abortion in the Vrelinghuis on Monday, Thursday or Friday were involved in this study. A total of 1021 women participated.

The diagnosis of gonorrhea can only be confirmed by the demonstration of gonococci. Among women with urogenital gonorrhea, more than 90% of the cases can be diagnosed by a gonococcal culture obtained from material of the cervix (1). A Gram-stain of pus obtained from the cervix only provides 60% selection. We chose the combination of Gram-stain and culture for this study.

After gynaecological examination, a sample was taken from the urethra and cervix. Ames transport-medium (Transwab) was used. The transport-media were sent by courier to the laboratory at the end of each morning. The laboratory prepared the media for final culture by dissolving 14.4 g GC Agar medium of Oxoid in 400 ml aqua dist. at 100°C; this then was autoclaved at 120°C for 15 minutes. After cooling to 50°C, 30 ml defibrinated sheep blood was added. This mixture was heated to 80°C until a "chocolate colour" was achieved. Then the material was cooled to 50°C and 1 g GC supplement and VCN-inhibitor, dissolved in 50 ml aqua dist., was added. The plates were incubated at a temperature of 37°C in a 4% CO_2-atmosphere. The plates were screened for the presence of gonococcal colonies at 24, 48 and 60 hours after inoculation. In addition, a Gram-stain was prepared. Inoculation also took place on a blood-medium. In case of a positive identification, a resistance-determination was performed.

RESULTS

A total of 1021 women participated in this study. Only 183 (17.9%) of the women were from the Netherlands; most of the women, namely 757 (77.1%) were from West Germany. The distribution of origin of the study-group corresponds to the distribution of origin of the total number of women who were treated in the Vrelinghuis during the study period. This also applied for the distribution of marital status and age. We believe that the study-group is representative of the abortion population as seen in the Vrelinghuis.

Twenty-two women (2.2.%) reported having V.D. before: 18 women had a gonorrheal infection, 1 received medical treatment for gonorrhea as well as lues and 3 women were treated for lues only. Of these 22 women, 8 were married and 14 unmarried. A total of 110 women (10.3%) had had a previous abortion. The connection between previous abortion and V.D. was not significant.

Gonorrhea was proven in 3 out of 1021 women. In all 3 cases, gonorrhea was proven by a positive cervical culture; the urethral cultures were negative. No Gram-negative diplococci were found in the Gram-stains. In each case, the isolated organisms were sensitive to penicillin and tetracycline. In all 3 cases, the gonorrhea was asymptomatic. None of these women reported having V.D. before or had a previous abortion. In our series, no relation was found between the prevalence of gonorrhea and age.

DISCUSSION

A number of authors have studied the prevalence of gonorrhea during pregnancy. The stated precentages vary from 1.0 to 7.5 (2-6). In comparison, the result from our study, namely 0.3%, is extremely low. From this alone, one may conclude that in the Vrelinghuis, the abortion population does not present a high-risk group for gonorrhea.

Gonorrhea can extend from the cervix to the tubes by at least two routes: directly ascending through the endometrial cavity or via the blood vessels. During pregnancy the first route is blocked by obliteration of the enodmetrial cavity. However, this obliteration is completed only after the first three months (7). The function of the tubes can be disturbed by desquamation of the plicae and the formation of crypt. This can lead to infertility or later ectopic pregnancy. In women, acute salpingitis occurs in about 10% of the cases of gonorrhea. It is estimated that a permanent sterility occurs in 1 out of 10 women who have had bilateral salpingitis. In our series, this would mean permanent sterility for 3 per 100000 women. In practice, this would be 1-2 cases per year for all the Dutch abortion clinics and hospitals together since the abortion population as seen in the Vrelinghuis is representative for the populations attending other clinics (8).

In the Netherlands, abortion clients only receive antibiotics on indication. Besides the extreme low incidence of postabortal infection observed without the use of antibiotics, the most important consideration for this policy has been the fact that through the prophylactic administration of antibiotics, resistant strains of organisms are selected and the development of multiresistant bacteria is provoked (9). We recognise that some people advocate the prophylactic administration of antibiotics with abortion in order to prevent the complications of a possible existing gonorrheal infection. The presence of 3 asymtpomatic cases of gonorrhea in a population of 1021 women, in our opinion, justifies neither the prophylactic administration of antibiotics nor routine gonococcal culture among all abortion clients.

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