MICROFLORA IN PREGNANCY

Pages with reference to book, From 79 To 81

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Abstract

Three hundred high vaginal swabs from pregnant women were cultured to investigate the vaginal flora during pregnancy. Two hundred swabs obtained from a private clinic were cultured aerobically for bacteria only, the remaining 100 from antenatal clinic of Khyber Hospital Peshawar were cultured both aerobically and anaerobically for bacteria and fungi (candida). Vaginal smears from patients in antenatal clinic were also examined for the presence of Trichomonas vaginalis. The organisms isolated were streptococcus faecalis, Escherichia coli, staphiococcus aureus, streptococcus agalactiae pseudomonas aeruginesa and candida albicans. Candida albiicans was the most common organism isolated. Staphlococcus epidermidis was the only pathogenic growth obtained. Trichomonas vaginalis was observed in only 5 mears. The only anaerobic growth was that of gram positive cocci.(JPMA 63 ; 79 1996).

INTRODUCTION

The vaginal flora vary considerably with the PH of the secretions and the amount of glycogen present in the epithelium. These factors in turn depend on ovarian function. The cervical canal is generally sterile or contains only a few bacteria, probably due to its relatively alkaline secretions.
The organisms present are identical to those found in the upper vagina. Bacteriological study of the female genital tract has shown that enterobacteriaceae and anaerobic bacteria are frequent pathogens. However the flora are variable. This study was undertaken to estimate the vaginal flora during pregnancy.

MATERIAL AND METhODS

The material consisted of high vaginal swabs from patients selected from the Antenatal clinic giving positive history of vaginal discharge and pruritus. Patients were put in the lithotomy position and vulva, cleaned with plain swab, Cusco's bivalve speculum was inserted in the vagina and swabs taken from the posterior fornix and immediately inserted in the glass tube. The swabs were cultured on to blood agar, Mac Conkey's agar, S.F. medium and Todd Hewitt broth. For the growth of candida albican the swabs were cultured on saboraud's decrose agar medium.
Mother specimen of the vaginal discharge was taken with a sterilized loop and smear was made on a glass slide alongwith a drop of saline and covered with a cover slip. It was examined microscopically for the presence of trichomonal infection. Inoculated plates were incubated both aerobically and anerobically for 18 hours at 37°C and the organisms isolated were identified by biochemical tests. The sensitivity test of the pathogenic organisms was performed by a paper disc diffusion method. The antibiotic discs included Nalidixic Acid, Gentamicin, Erythromycin, Pencillin and Carbencfflin.

RESULTS

Three hundred high vaginal swabs were cultured. Two hundred from pregnant women attending a

private clinic, while the remaining from antenatal clinic of Khyber Hospital Peshawar. The ages of these varied from 1 7 to 38 years and the duration of pregnancy from 3 to 9 months. Vaginal smears from one hundred patients of antenatal clinic were also examined microscopically for trichomonal infection.

Three types of discharge was seen in these patients. Watery, thick white and thick creamy offensive discharge. The main complaints in these patients were embarrasing itching, malodorous discharge, burning, irritation and dysparunia.

The most common infective organisms isolated from the patients in antenatal clinic were Escherichia coli(1 8%), staphaureus(26%), streptococcus agalactiae(1 6%), Streptococcus faecalis (16%), Pseudomonas aeruginosa (46%) and staph epidermidis(20%). Anaerobic streptococci were isolated from S cases, candida albicans in 50 and trichomonas Vaginalis in 5 cases. Staphlococcus aureus was confirmed by coagulase test and streptococcus agalactiae and streptococcus faecalis by grouping sera. The drug sensitivity pattern is shown in the accompanying table. Gentamicin was the most effective drug for Escherichia coli followed by Nalidixic acid and carbencillin. Pseudomonas aeruginosa was most sensitive to Gentamicin and Streptococcus agalactiae(GPB) to penioillin. Other drugs in order of effectiveness were erythromycin and ampicillin (Table).

Table

% of Strains of Species of Bacteria Sensitive to Antimicrobials.

Organisms their number	Nalidixic Acid	Gentamicin	Erythromycin	Clindamycin	Pencillin	Carbencillin	Ampicillin
Streptococcus faecalis (50)	N.T.	15(30)	37(74)	28(56)	30(60)	N.T.	36(72)
Escherichia coli (54)	27(50)	42(77.7)	2(3.5)	1(1.8)	2(3.7)	15(27.7)	8(14.8)
Staphlococcus aureus (78)	4(5.1)	59(74.3)	45(57.6)	60(76.9)	7(8.9)	37(47.4)	16(20.5)
Streptococcus agalactiae (50)	N.T.	21(42)	41(82)	N.T.	46(92)	N.T.	33(66)
Pseudomonas aeruginosa (14)	12(85.7)	13(92.1)	1(7.1)	1(7.1)	1(7.1)	9(64.2)	1(7.1)

DISCUSSION

The vaginal microbial flora were often investigated during sixties. [1,2] In seventies advances in microbiological techniques led to the isolation and identification of new bacterial species[3]. Detailed quantitative microbiological methods. also become feasible in the laboratory. Those new techniques have spurred to a series of investigations. [4-11]

Afzal et al[12] reported a 33% incidence rate for staphiococcus aureus, staphlococcus epidermidis 26 percent, streptococcus pyogenes 25%, Escherichia coli 22 percent arid streptococcus faecalis 18 percent. In the present survey streptococcus agalactia i (GPB) was isolated however no GPA streptococcal strain was found although specific culture medium (Todd Hewitt broth) for its cultivation and grouping sera for confirmation were used.

Marked clinical improvement was achieved with nystatin vaginal cream locally and Mycostatin oral tablets. High cure rate after a single course of therapy was obtained except in two cases, where relapses occurred and a second course of antibiotics was given. Not a single patient showed resistance to treatment or reinfection. It is suggested that consorts of these cases should also be checked as they may

be harbouring similar infective organisms.

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