ACUTE INFECTIVE ENDOCARDITIS FOLLOWING ABORTION

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SUMMARY

Three cases of infective endocarditis following abortion are presented. The diagnosis of infective endocarditis were not made ante-mortem in the first two cases but with these experiences, a third case was promptly diagnosed and managed successfully. Attention is drawn to this serious complication of abortion which has hitherto not been documented and stressed upon in Ghana.

KEY WORDS: ABORTION, INFECTIVE ENDOCARDITIS.

INTRODUCTION

Infective endocarditis is one of the most serious of all infections. On clinical grounds, infective endocarditis has been divided into acute and subacute forms. While the subacute variety is relatively easier to recognize in the febrile patient with chronic rheumatic heart disease, congenital heart defects, prosthetic valves or long term venous catheterization, the acute form is often fulminant with severe constitutional symptoms in a patient with a previously normal heart. Dental manipulations and micro-trauma from genito-urinary procedures especially urethral catheterization have been stressed as predisposing causes of infective endocarditis in those predisposed. Abortion may also be a predisposing cause to infective endocarditis but this is now rare in developed countries and has not been emphasized in the literature. Gynaecological infections have been established as identifiable causes of infective endocarditis in Uganda. Childbirth and abortion accounted for 7 and 3 percent respectively of infective endocarditis in Nigeria. Abortion, whether legal or illegal, is common in this country and the conditions under which some are performed are less than satisfactory. Many complications of abortion have been documented in this hospital, but so far infective endocarditis has not. The incidence of clinical infective endocarditis in this hospital or in this country is not known. An earlier study of post-mortem cases put the incidence at 5.5 per cent. We report three cases of acute infective endocarditis following abortion. These cases illustrate the diagnostic difficulties and draw attention to this serious complication of abortion.
CASE HISTORY 1

Two weeks prior to admission of a 17-year old girl to the Medical Unit she had had termination of pregnancy at a private clinic. Ten days later she was admitted to a different private clinic with complaints of chest pains, fever, cough and vomiting. A diagnosis of bilateral pneumonia was made and she was started on crystalline penicillin. She was also given metronidazole for trichomonas vaginalis. The haemoglobin then was recorded as 9.4gm/dl; WBC 18.5 x 10/L, with a neutrophilia. She did not improve on this treatment and was transferred to Korle Bu Teaching Hospital. The bilateral consolidation of the lungs were confirmed both clinically and by radiography. In addition hepato-splenomegaly was detected. The Hb was 5.4gm/dl, ESR 150mm fall in the first hour, WBC 49.0 x 10/L, 90% neutrophilia. Two blood cultures were later reported sterile. The clinical diagnosis was bilateral pneumonia and severe anaemia due to blood loss. She was started on intravenous ampicillin. On the third day of admission she developed congestive cardiac failure which was attributed to the anaemia and was managed on standard lines including transfusion of packed red blood cells. She died within 24 hours on the development of heart failure.

The post-mortem examination revealed a dilated right ventricle with acute vegetative endocarditis of the tricuspid valve with perforation of valve. There was contusion of the vaginal vault, bruising of the uterine fundus and presence of necrotic materials in the uterine cavity. In addition there was extensive advanced consolidation of all lobes of the lungs with multiple abscesses. Septic abortion, extensive pneumonia and acute bacterial endocarditis were listed as causes of death.

CASE HISTORY 2

C. A. was 26 years old when we saw her. She had been admitted to a hospital in Accra in June 1982 with a diagnosis of septicemia, pneumonia and septic arthritis involving the knees and hips. She did not respond to a course of ampicillin and gentamicin. She was therefore given a therapeutic trial of anti-tuberculous drugs namely streptomycin, rifampicin and isoniazid in standard doses without improvement in her condition. She was at this stage referred to the Korle Bu Teaching Hospital. She confessed to have terminated a pregnancy prior to the onset of her illness. The findings at the referring hospital were confirmed clinically and on radiology. Blood cultures were sterile, Hb was 7.6gm/dl; ESR 46mm fall in the first hour. A clinical diagnosis of septicemia from pelvic infection was made and she was started on ampicillin, gentamicin and metronidazole but she died on the day of admission.

The post-mortem examination showed serous pericardial effusion, large friable vegetation on the tricuspid valve; there were consolidation and septic infarcts in both lungs and pulmonary embolism of the right pulmonary artery. There were septic infarct in the kidneys, the uterus and adenexae were however normal. Acute infective endocarditis with multiple septic organ infaracts were listed as the causes of death.

CASE HISTORY 3

A. A. was a 19-year old female admitted to our Unit from the Gynaecological Unit where she had presented three days earlier with a febrile illness following evacuation of the uterus for a spontaneous incomplete abortion four weeks earlier.
The initial physical examination at the Gynecology Ward revealed no focus of infection, in particular, there was no evidence of pelvic infection. She was presumed to have malaria and was given a course of chloroquine but subsequent blood film did not confirm the diagnosis and her response to treatment was not satisfactory so she was referred to our Medical Unit. She was found to be febrile (Temp. 39°C), pale, not jaundiced and no lymphadenopathy was detected. The significant findings were a harsh (grade 4/6) pansystolic murmur best heard along the left parasternal margin in the second, third and fourth intercostal spaces and an enlarged liver. The presumptive diagnosis was infective endocarditis following abortion. Serial blood cultures and urine cultures were done and the patient started on crystalline penicillin and gentamicin. Her initial Hb was 4.0gm/dl, WBC 2.3 x 10/L with normal differential and platelets 165.0 x 10/L. The blood cultures and urine cultures were sterile. Echocardiographic examination of the valves showed increased echoes on the posterior leaflet of the mitral valve suggesting vegetations. The temperature settled at the end of the first week on these antibiotics and remained so for the next three weeks when treatment was discontinued. The heart murmur at this time had diminished in intensity and was virtually inaudible. She was observed for one more week off antibiotics and she continued to be afebrile, she was therefore discharged for follow-up as an out-patient. She remained well three months after discharge.

DISCUSSION

Sepsis, tetanus, severe haemorrhage, shock (hypovolaemic/septic), perforation of the uterus and other intra-abdominal viscera are well recognized complications of abortions and all these are documented in a study of 330 cases of abortion studied in Korle Bu Hospital. Infective endocarditis following abortion has so far not been reported in this hospital. These cases vividly illustrate the occurrence of infective endocarditis following abortion in our environment. Sepsis encountered in abortion usually responds promptly to broad spectrum antibiotics and evacuation of the uterus. The first two cases differed in this respect in that the sepsis did not respond readily to antibiotics over prolonged periods. Septic emboli from the right heart to the lungs maintained the sepsis in the lungs. This presentation is quite common in right-sided acute infective endocarditis and it is usually fulminant. The experience from the first and second cases made us aware of this possibility in the third patient and also the fact that there was a changing murmur in this patient made the diagnosis much easier. We strongly suggest that infective endocarditis must be considered in patients who present with sepsis following abortion and other gynaecological or obstetric manoeuvres which do not readily respond to broad spectrum antibiotics. Diagnosis of infective endocarditis relates to the index of suspicion, facilities for bacteriological diagnosis and the frequency of post-mortem examination. The blood cultures in our patients were sterile probably because of the prior antibiotics prescribed for pneumonia, the routine prescription of broad spectrum oral antibiotics after evacuation of the uterus. Detailed information of antibiotics used is often not communicated to the laboratory, nor the suspicion of infective endocarditis expressed to enable the bacteriologist to take appropriate steps to identify the offending organism. The involvement of the tricuspid valve will suggest rather virulent organism such as staphylococcus aureus, in which case our choice of antibiotics in post abortion endocarditis should include antistaphylococcal drugs. This serious complication of abortion is more likely to present to the physician rather than the gynaecologist and must be suspected in the female of child bearing.
age who presents with fever or unknown origin or fulminant sepsis. Organisms are discharged into the circulation independent of the time of the fever, so several blood cultures should be obtained initially before antibiotics are given. Treatment can be modified in the light of bacteriology report or clinical response.

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REFERENCES


