On auscultation is a systolic murmur somewhat harsh in character, maximum intensity at apex, well heard towards end of sternum and propagated to axilla. A systolic murmur is heard, harsh, loud, swishing with a maximum intensity in 3rd left space transmitted down left border of sternum. The first sound is obscured at apex and replaced at pulmonary orifice by the respective systolic murmurs. 2nd sound is diminished at pulmonary and increased at apex. 1st and 2nd aortic sounds rather diminished. Systolic murmurs at aortic and tricuspid areas, faint and probably transmitted there.

Diagnosis (*Differential*):—Not patent foramen ovale because of marked cyanosis, absence of diastolic and pre-systolic murmurs and of venous pulsation, in spite of the acquired mitral regurgitation (probably present). Not defect of the interventicular septum because murmurs not transmitted to interscapular region and there is a marked thrill present. Not stenosis of the aorta because condition very uncommon compared to pulmonary stenosis and most forms of former lesion are incompatible with long extrauterine life. Symptoms of this condition in later life when accompanied with acquired mitral regurgitation, are (1) Marked hypertrophy of the left heart, (2) cyanosis usually absent, (3) loud systolic murmur and thrill over manubrium sterni, conducted into vessels of neck, (4) visible collateral circulation of arteries over chest and abdomen, (5) sometimes retardation of femoral pulse and marked weakness of pulse over lower half of body.

The condition which would best account for the symptoms present is Patent Ductus Arteriosus, the symptoms of which are: a loud systolic bruit in the 2nd or 3rd left intercostal space a short distance from the sternum, which is accompanied by a palpable thrill and an accentuated second sound. Occasionally there is a diastolic murmur. The left ventricle is usually hypertrophied. The faintness of the 2nd pulmonic sound may be accounted for, perhaps, by some stenosis in the pulmonary artery which is a frequent accompaniment of patent ductus. Finally, it does not seem illogical that the patient may have an acquired mitral regurgitation as indicated by the hypertrophied left ventricle, the systolic murmur, best heard at the apex and transmitted to the axilla, and by the fact that the 2nd pulmonic sound is at all present in spite of the pulmonary stenosis assumed.

Prognosis:—"The prognosis in uncomplicated cases of patent ductus arteriosus is more favourable than in most forms of congenital heart disease. About half of the published cases have survived puberty, and many have had long and active lives without any signs of disease." In this case, however, the lesion is apparently not uncomplicated and the