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## Diagnostic Problem

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### Abstract

#### Subject:

C.S., married, female, aged 33. Housewife.

#### Past History:

1. Usual childhood illnesses.
2. Pneumonia on three occasions between the ages of 3 and 5 years.
3. Rheumatic fever, aged 9 years.
4. Tonsillectomy, aged 10 years.
5. Appendicectomy, aged 16 years.
6. The patient had two normal pregnancies, aged 23 and 24 years.
7. Perforation of duodenal ulcer, aged 25 years. — Gastroenterostomy.
8. Gradually progressive exertional dyspnoea began, aged 27.
9. Two miscarriages, aged 28, followed by tubal ligation on the grounds of rheumatic heart disease.
10. Mitral valvulotomy successfully carried out, aged 29, with relief of symptoms.
11. Recurrence of classical acute rheumatism, aged 30.

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ing timetable, or may compare the vital statistics of one hospital with another to indicate how an epidemic is spreading.

The next difficulty is that as the requirements get more complicated, so programming the machine takes longer, and several centres are trying to devise systems in which the machine programmes itself. As an example, various attempts have been made to write a programme for the computer to play chess. For a man to tell the machine what to do in every possible situation in advance would take a very long time. However the machine can survey the positions of all the men on the board and then try a move at random. If this results in immediate gain, or if it eventually wins the

game, it will try the same moves for each time the particular combination of men recurs in future games. If it loses, it will remember what its opponent did, and will use his moves in future instead. Analysis of game theory in this way has led to important advances in other sciences, and may well be of use in the medical field in the future.

Altogether the computer may well provide the spectacular changes in Medicine in our generation that antibiotics and bacteriology provided for our forefathers, and time spent acquiring some knowledge of how it works while at University is most unlikely to be time wasted.

## DIAGNOSTIC PROBLEM

Set by Robin B. L. Ewart, M.B., Ch.B., B.Sc.

(answer on page 44)

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Following discharge from hospital, the patient seemed initially to be well but 2½ years later was readmitted with the following complaints —

1. Tendency to bruise on minor trauma, — 1 year.
2. Marked emotional lability — 1 year.
3. Progressive increase in weight amounting to 9 lbs. in the previous six months.
4. Increasing lethargy — 3 months.

### Social and Family History :

Not relevant.

### Examination :

Plump, plethoric woman, looking older than her 33 years.

Marked bruising of all four limbs was evident.

C.V.S. Pulse 102. Regular in time and force. B.P. 180/110. Auscultation of the heart revealed the classical signs of mitral stenosis and incompetence. There was no sign of cardiac failure.

All other systems essentially negative to full examination.

### Findings:

1. History of bruising, emotional lability, increasing weight and lethargy.
2. Plethora.
3. Diastolic hypertension.

What is the diagnosis? How would you confirm it?