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Colebrook L, Kenny M (1936b). Treatment with prontosil of puerperal infections due to haemolytic streptococci. Lancet 2:1319-1322.

Key passages

TREATMENT WITH PRONTOSIL OF PUERPERAL INFECTIONS

DUE TO HÆMOLYTIC STREPTOCOCCI *

BY LEONARD COLEBROOK, M.B. Lond.

MEMBER OF THE SCIENTIFIC STAFF, MEDICAL RESEARCH COUNCIL

MÉAVE KENNY, M.R.C.S. Eng., M.C.O.G.

LATE RESIDENT MEDICAL OFFICER, ISOLATION BLOCK, QUEEN CHARLOTTE'S HOSPITAL, LONDON

And the members of the

HONORARY STAFF OF QUEEN CHARLOTTE'S HOSPITAL

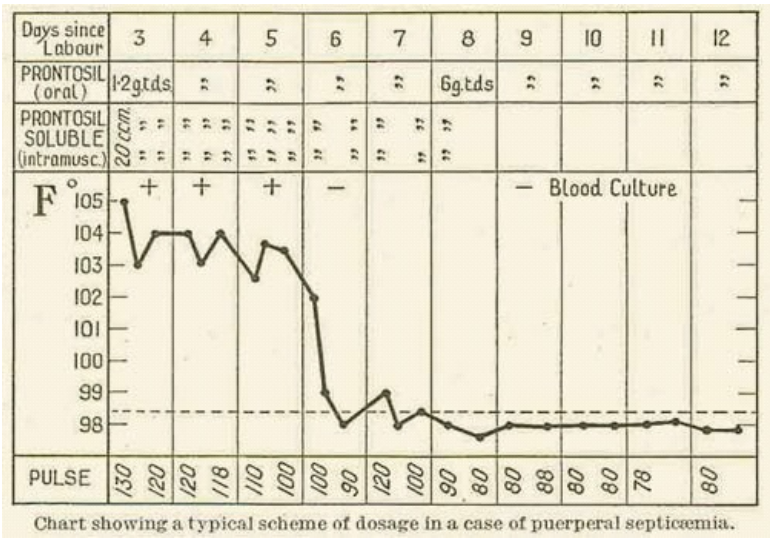

Chart showing a typical scheme of dosage in a case of puerperal septicæmia.

TABLE III

Death-rate for all cases infected by Hæmolytic Streptococci (Queen Charlotte's Hospital)

—	Number of cases (all grades).	Deaths.	Deaths from peritonitis.*	Blood-positive cases (hæm. strept.) without general peritonitis, and death-rates.
1931	98	31 = 31·6 %	23	—
1932	90	19 = 21 %	16	1 (died = 100 %)
1933	97	20 = 20·6 %	14	9 (6 deaths = 66 %)
1934	120	20 = 16·6 %	16	15 (4 deaths = 27 %)
1935	90	22 = 24·4 %	15	13 (7 deaths = 53·8 %)
1936 Jan.–Aug.	64 (treated by prontosil)†	3 = 4·7 %	1	8 (2 deaths = 25 %)

DISCUSSION OF CLINICAL RESULTS

The death-rates shown in Table III., with the considerations put forward above, make it difficult to resist the conclusion that the remarkable improvement in the clinical results has been chiefly due to the introduction of treatment with prontosil. That conclusion is strongly supported by the analogous and unmistakable curative effects obtained in experimental animals. There are, however, other possible, albeit improbable, explanations of our clinical results which ought to be kept in mind. We might have been deceived by the purely fortuitous admission of an unusually mild group of cases ; or, on the other hand, by a spontaneous and rather sudden diminution of "virulence" (killing power) of the hæmolytic streptococcus for the human subject. In view of the importance of arriving at a correct evaluation of the effect of prontosil, we have been at some pains to examine both these possibilities.

First, is there any evidence that, by the mysterious operations of chance, the 64 cases treated with prontosil have included an unusually large proportion of mild cases and a correspondingly small proportion of severe ones ? This question is to some extent capable of investigation, for it is well known that the great majority of deaths in puerperal fever due to infection by the hæmolytic streptococcus occur in two groups of cases—viz., the group of "generalised peritonitis" and that of "septicæmia" (cases with hæmolytic streptococci actually detected in the blood stream).

An analysis of the 64 cases treated with prontosil and of all the similar infections in recent years is shown in Table IV. There has clearly been no great reduction in the incidence of septicæmia (and it should be borne in mind that in the prontosil-treated series there were 3 cases admitted with an unusually heavy blood-stream infection). The true incidence of "general peritonitis" is more difficult to assess for the reasons explained above, but even if we make some allowance for mistaken diagnosis in a few of

the cases, it seems unlikely that there has been such a change as to account for the very large reduction in the death-rate.

A careful review of our prontosil-treated cases seems, therefore, to justify the view that their infections as a whole were of approximately the usual severity. There remains the second question: has the "virulence" of the streptococcus for man diminished during the present year? This, of course, is very difficult to answer with assurance, but there are undoubtedly certain data which suggest that a change of this kind may be taking place—just as it has already taken place in scarlet fever.