

hours, until dilatation of the pupil, dryness of the throat, and delirium were produced. This treatment was commenced in the afternoon, and during the night following he passed a calculus as large as a bean. It is to be noted that the treatment gave speedy relief of pain, but not content with this, the effect of the drug was kept up so as to ensure the passage of the stone. The third case was that of a youth, who suffered so severely from renal pain that it was determined, at a consultation of the staff of the Royal Infirmary at Newcastle, to remove the calculus by operation. Before consenting to the operation, his parents brought him to me. I suggested the belladonna treatment, promising to send him to the hospital again if it failed. In this case, twenty drops of tincture of belladonna were given at intervals of an hour, and at the end of four or five hours, he passed a round and rough calculus composed of urates; and I was able to send the boy to the hospital to present the stone to Mr. Page, from whom I received liberal congratulations. These cases, I maintain, are sufficiently striking to arrest our attention, and to tend to establish the fact that belladonna relieves the pain of renal colic, and, by its peculiar action on the muscular fibres of the urinary passages, removes the stone. In the present state of pharmacology, we cannot say what its precise mode of action may be. It may act by simply paralysing the circular muscular fibres of these canals, thus allowing the stone to be washed out by the urine; or, while paralysing the circular fibres, it may stimulate the longitudinal fibres. The special point to be remembered is that we are to push the drug to its toxical stage, and keep up its action after the pain has been relieved, until a fair time has been allowed for the expulsion of the stone. We may begin with a forty-drop dose of the tincture, and repeat it every two hours, increasing or diminishing the dose according to its effect on the patient.

P.S.—Since the above was published, I am assured by Dr. Wicks, Dr. Jennings, of Jarrow, and others, that this treatment has been tried by them with success in several cases. Let me repeat that the point in the treatment is to push the toxic doses until complete atropism is produced, irrespective of the mere relief of pain, and further, that this treatment is of no use except during an attack of colic.

2. *Dysmenorrhea*.—Let it be admitted that dysmenorrhea is due to spasm, or to mechanical obstruction *plus* spasm, or *plus* neuralgia, or *plus* inflammatory or congestive action in or connected with the uterus, and there is a large field for the action of belladonna. A patient well under the influence of the drug is not