

matter when stimulated by injections. Passing from Dublin to London at this time, I conveyed to Mr. Liston, a small phial of the fluid of an encysted hydrocele of the cord which Mr. Cusack had tapped the day on which I left Dublin, and its contents were examined by Mr. Liston, in my presence and found not to contain spermatozoa. Ever since then I have examined the fluids I have drawn off from hydroceles of the tunica vaginalis and of the cord, and in 1849, I published a case of hydrocele of the tunica vaginalis which contained *forty ounces* of fluid, in which a large number of spermatozoa were discovered. Since then I have found them occasionally in the fluid of hydroceles of the tunica vaginalis, but not so frequently as in that of encysted hydroceles of the cord. I lately tapped one of the latter, which the patient supposed to be a hernia, and for the relief of which he had worn, for several years, a nicely adjusted truss. Large quantities of spermatozoa were found in it. I sent a specimen of them to Dr. Howard to exhibit to his clinical class at McGill College. Various explanations have been offered to account for the presence of these bodies in the fluid of hydroceles, besides that advanced by Mr. Liston. It has been supposed that in some cases the trocar has pierced the testicle; but this explanation has been disproved by the fact of spermatozoa being found in the dead body when the operation has not been performed. Mr. Paget published a paper in the *Medico-Chirurgical Transactions*, Vol. 27, giving the following explanation, which he has more recently repeated in his admirable work on *Surgical Pathology*,—"the most probable explanation of these cases, therefore, seems to be, that certain cysts, seated near the organ which naturally secretes the materials for semen, may possess a power of secreting a similar fluid; and this explanation is in some measure supported by the analogy of those cysts which are found in the ovaries, and more rarely in other parts of the body, especially beneath hairy parts of the skin, and in which the ordinary products of the skin, such as epidermis, sebaceous matter, hair, &c., are formed on the genuine cutaneous tissue of their internal surface."

To these explanations I made the following objection which I quote from a paper I published in "*British American Journal of Medicine*" for March 1849, and reprinted without abbreviation in *Ranking's Abstract* for 1849.

"It appears to me that neither of the above explanations is satisfactory. It is true that by a careless operator the testicle or cord might be punctured in a small hydrocele, but in one so large as to contain forty ounces of fluid, and in which the testicle and cord were removed to a great distance from the point of entrance of the trocar, the escape of spermatozoa cannot be accounted for on such grounds. And Mr. Paget's solution of the difficulty seems equally untenable; for without resting our objection to it on the fact that cysts in the neighbourhood of other glands, whose secretions are purely (or nearly so) excrementitious, as the kidney and liver, are not found to contain the most essential elements of these secretions, and that the fluid of cysts developed in close contact with the testicle and seminal ducts is found destitute of seminal animalcules, as proved by the recent observations of Gosselin,* it is impossible to believe that a diseased

* Vide Archives Générales, tom xvi.; and British and Foreign Medico-Chirurgical Review, No. IV, p. 533.