

lating it, as is the case with that containing pus, renders it clear. These are expeditious and reliable means of distinguishing the two.

A few words upon the coagulation which takes place in purulent urine on the application of heat and nitric acid. This coagulation is due to the albumen contained in the fluid, the *liquor puris*, in which the pus-corpuscles float, and the amount of coagulation is in direct proportion to the amount of pus present. This fact, viz., that purulent urine is always albuminous, should be borne in mind, since, no doubt, the coagulation produced by the re-agents just mentioned, when applied to urine containing pus, has too often led the inexperienced to suppose that the patient was necessarily suffering from Bright's disease.

Deposits of pus may be confounded with those of mucus—and yet, with moderate care, they may be easily distinguished. In the first place, mucus rarely forms a layer or stratum at the bottom of the vessel, as does pus, neither is it easily diffusible through the fluid by agitation. Secondly, the urine containing mucus is alkaline, whereas purulent urine is almost always acid—or when it is alkaline, owing to decomposition, the purulent deposit exhibits the glairy appearance of mucus, and is under those circumstances most liable to be mistaken for it. In such a case, we must have recourse to acetic acid, in which mucus is soluble, and to the microscope, under which we shall not fail to find more or less epithelium, “and the so-called mucous particles, a small number, which doubtless are incipient pus-corpuscles.” Thirdly, mucus does not contain albumen in a state to be coagulated by heat or nitric acid. If these simple facts are kept in mind, there need be scarcely any difficulty in distinguishing these deposits.

Pus being present in the urine, we are anxious to discover its source, a point in almost all cases attended with more or less difficulty, and in some perfectly impracticable. Pus may come from any portion of the mucous membrane of the genito-urinary organs—or it may come from some adjoining abscess which has opened into the urinary passages.

Pus from the kidneys may be the result of inflammation of the tubuli and pelvis of the kidney (pyelitis), of suppurative nephritis, and of other renal affections. Without going into detail upon the diagnostic symptoms of these affections, we can only remark that in a majority of cases the local symptoms are sufficiently well-marked, and point to the kidneys as the parts implicated—in many cases, moreover, our diagnosis being confirmed by the discovery under the microscope of “tubular casts” mixed with the purulent deposit. One very essential point must be remembered, viz., that the urine flows from the kidneys into the bladder acid, therefore if the urine which contains pus is found to have an acid re-action, particularly after long standing, we may be quite sure that the morbid admixture comes from the kidneys, particularly if we have the symptoms of renal disease present, or else from some abscess external to the urinary apparatus.

Pus from the bladder is almost always the result of inflammation of its lining membrane, which, however, under such conditions, pours out a vitiated mucous secretion, which seems to bring about a speedy decomposition of the urine—and certain changes in the purulent deposit, such