the fatal termination was so long postponed. He did not even die immediately from the sudden attack of apoplexy above alluded to; for, by dint of care, he in three months' time partially recovered from both the apoplexy and its associated right-side hemiplegia, and might possibly have lived for some years longer had he not given way to a sudden outburst of temper, which induced the still imperfectly healed cerebral bloodvessel, or some other equally weak one, to give way, and cause his almost instantaneous death in the presence of his local doctor, who happened to be with him at the time. The immediate cause of the last attack in the case of the patient with hypertrophied and dilated heart I attributed to the excitement he underwent from a horse he was driving running away. So that both cases may be said to illustrate well the necessity of always enjoining on patients similarly affected the absolute necessity of avoiding all forms of sudden mental excitement, as well as of bodily exertion.

ON THE POSSIBILITY AND UTILITY OF WASHING OUT THE PELVIS OF THE KIDNEY AND THE URETERS THROUGH THE BLADDER.

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IN THE LANCET of Oct. 29th, 1887, I have illustrated the use of suction as a means of extracting certain kinds of foreign bodies from the bladder, and incidentally referred to a case where I believe a renal calculus had been dislodged from the ureter in this way. In connexion with some experiments upon which this practice was based, I would now refer more especially to the possibility of distending the ureters with fluid, and thus reaching the pelvis of the kidney. In the normal condition of the parts such a process could only be brought about, I believe, by very gradual means, as the mode in which the ureters enter the bladder is to render sudden regurgitation of fluids from the latter towards the kidneys wellnigh impossible. In cases of long-standing stricture and prostatic obstruction, we see this provision gradually destroyed until the ureters and pelvis of the kidney become little else than subsidiary bladders. Again, in other instances the valve-like arrangement which prevents fluid passing along the ureters in any other than a downward direction is liable to be deranged by the passage of calculi and suppurative debris, as we so frequently see in tubercular disease of the kidney. With conditions like these, it occurred to me that fluid might be made to pass from the bladder along the ureters to the pelvis of the kidney, and this observation has suggested some trials in practice which I think are worthy of notice.

I have in the previous communication here referred to, alluded to a case where, I believe, a calculus was dislodged from the ureter by distending the bladder with fluid by means of a suitable apparatus, and thus causing a back flow along the canal, which would tend to dilate that portion of it which was below the stone, whilst at the same time some slight movement would probably be communicated to the obstruction. That the ureter was more or less dilated I thought probable from the fact that the patient had been in the habit of passing kidney stones, and had suffered much on these occasions from renal colic. Whether my conclusion that the escape of the calculus was connected with the injection into the bladder was a correct one it is impossible to say, but I thought the coincidence a suggestive one.

Take another instance. A middle-aged man was under my observation a short time ago for acute renal pain and hæmaturia, which I felt sure, from his previous history, was due to a stone in his left kidney. The symptoms continued in spite of a variety of attempts to dislodge the calculus. Then I suggested nephrotomy, but the patient would not consent. Shortly after this the position of the pain changed, and I had reason to believe that the stone had made its way into the ureter. Shampooing of the side, friction, and other means were tried, but without benefit. I then resolved to try fluid distension of the ureter. After washing out the bladder, I filled it with tepid water, upon which pressure

was exercised by the evacuator usually employed in lithotomy. The patient made the observation spontaneously, "I can feel something moving in my back." On examining the glass receiver of the aspirator bottle, after a few manipulations, I found that it contained about half a teaspoonful of fragments of phosphates and urates, not in crystals, but apparently in small pieces. These were examined by Dr. Barron, and found to be portions of a calculus. Wherever they may have come from, it was clearly not from the bladder. This process was again repeated in a fortnight afterwards, with similar results, care being taken in the first instance to empty the bladder of anything that it might contain.

A second case, very similar to the one just narrated, is also under observation, where the proceeding was followed by the withdrawal in this way of a small teaspoonful of what proves to be fragments of a urate stone.

When we take clinical facts such as these, and compare them with pathological specimens—as, for instance, the one I have elsewhere figured¹ (through the kindness of Dr. Reliquet of Paris), where an open ureter ultimately induced a calculous pyelitis,—I do not think we can deny the possibility, under certain circumstances, of our being able to distend a ureter with fluid, and thus to reach the pelvis of the kidney. When we consider that most urate stones are usually formed in the kidney, and grow, as it were, by reason of their being accidentally trapped in the bladder, the importance of securing their discharge in the earliest periods of their formation must be obvious. Further, the practice I have thus endeavoured to illustrate may possibly be found useful in facilitating the discharge of inflammatory products from the kidney, and as a means of direct medication in certain cases of hæmaturia which are generally regarded as being beyond the reach of surgical manipulation.

TEREBINTHINATES.

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THERAPEUTISTS have lately evinced a revival of interest in the terebinthines. One result of this is seen in the extended use of terebine in bronchial affections. I now invite the attention of practitioners to two other allied products, more particularly as to their use in diseases of the respiratory mucous tract. These are (1) the essential oil of the mountain pine and (2) hydrate of terpin.

1. The *Mugho* or *Mountain Pine* is the *Pinus pumilio* of Lambert, and from which exudes the once-prized Hungarian balsam. By distillation of the young branches with water a volatile oil is obtained long known as "oleum templinum" or "Krummolzöl." This is the most potent agent in the so-called "pine-cure" practised at Reichenhall and other German spas. At these resorts the vapour of the water, as it escapes into the inhalation rooms, is medicated with the volatile oil. The pine baths at these spas are not medicated with the Krummolzöl, but with a much cruder product—viz., an extract obtained by evaporating a decoction of the wood and branches, and perhaps also the residue after the distillation of the oil. Moreover, the baths are mostly employed in rheumatism, gout, and other affections for which thermal baths are suited; while the inhalations are chiefly used in diseases of the respiratory tract. By improved apparatus and greater care in the selection of the material a much finer product is now obtained—in fact, a very pure essential oil, *oleum pini pumilionis*; and this it is which has lately been imported under the fanciful name "pumiline." This essential oil possesses in a high degree the odour of the most fragrant variety of the pine, and, moreover, is less irritating than other fir oils. Sprinkled or sprayed about a sick room it imparts a lasting and grateful fragrance to the air, which is not oppressive and it seems to be disinfectant; or it may be thrown into a little warm water and allowed to evaporate; or it may be diffused by a steam inhaler (Dr. Lee's or Siegle's) or a hand-ball atomiser. Either of these methods may be utilised for the purpose of maintaining an atmosphere laden with pine odour as a substitute for that of Arcachon, Reichenhall, or Bournemouth. The oil can also be taken internally,

¹ The Surgical Disorders of the Urinary Organs. By Reginald Harrison. Third edition. Plate on p. 587 (from Reliquet).