change. I then conceived that the deltoid must be the chief cause of my failure, and by elevating the arm I relaxed this muscle, but still could not reduce the dislocation. I next divided the deltoid muscle, and then found the supra-spinatus muscle my great opponent, until I drew the arm directly upwards, when the head of the bone glided into the glenoid cavity. *The deltoid and supra-spinatus muscles are those which most powerfully resist reduction in this accident.*"

Let us now refer to Mr. Crampton. He says—"In order to ascertain the nature of the obstacles which oppose the reduction of the dislocated humerus, the scapula was fixed by the arm being raised to nearly a right angle with the body; extension was slowly applied to the arm by pulling at the wrist; it then appeared that so long as the hand was held supine, the head of the bone remained immovable, the chief resistance appearing to be caused by the *closing of the biceps and triceps behind the head of the bone*. The muscles on the back of the scapula being detached from the greater tubercle, could of course afford no resistance, but on turning the position, and giving motion of rotation inwards to the whole limb, the extension being still maintained, the head of the bone glided easily into the socket."

Here then we have the description of three cases, with the opinions of three eminent surgeons, derived from the appearances which each case presented on dissection. The direction and character of the dislocation were the same in all three, but the effects and the obstacles to reduction were very different according to the statements of these gentlemen. Mr. Thompson considered the teres minor and subscapularis muscles the great opponents; Sir A. Cooper, the deltoid and supra-spinatus; whilst Mr. Crampton, whose case bears great analogy to that of Mr. Thompson, affirms that the difficulty of reduction arose from the contraction of the biceps and triceps behind the neck of the bone.

These three cases, as well as the others which I have related to you, establish the fact, that in dislocations apparently similar, there are many kinds as well as degrees of lesions, and consequently very different causes of opposition to reduction; they also point out to you the necessity of acquiring a complete and general knowledge of the subject, the direction and attachments of the muscles, what have been the difficulties encountered in these cases, what has been observed on dissection, and lastly, what has been done by others to obviate these difficulties; for if you content yourselves with merely adopting individual views, or being guided by individual experience, you will find yourselves very much at a loss when you arrive at the practice of your profession.

M. Malgaigne places the subscapular among the muscles stretched. He observes, "the deltoid is much elongated, the supra and subspinal, and teres minor, are stretched over the glenoid cavity. The subscapular passes above the head of the bone, interposed sometimes between it and the coracoid process; it is more stretched than any other and tends to draw the head of the bone into the subscapular fossa." M. Filugelli, of Parma, in a paper on reduction of recent dislocations, controverts this opinion of Malgaigne, and states, that "all the observations he has made upon the dead body tend to contradict the statement as to the subscapularis

muscle." But with regard to experiments made on dead bodies, we must always take into consideration, that the parts acted upon are in a very different state to what they are during life. The dead muscles being deprived of their vital contractility, have no longer the power of offering any active resistance, or of exerting any active influence over the bone, either in displacing it or in retaining it when so displaced, further than that which would be experienced from any other passive bands; the evidence, therefore, which these experiments afford, must be regarded as anything but conclusive. However, I am disposed to agree with M. Filugelli generally as to the subscapularis muscle, inasmuch as he is supported by the facts exposed in the cases I have related, for in eight out of the eleven, this muscle was either completely detached or extensively lacerated. M. Filugelli asserts that the resistance to reduction is not due to muscular contraction, but that other aid is necessary. "Thus, he says, it is the bony prominences which, projecting against the articular head on the one hand, and the stretched muscles on the other, incessantly pushing the latter against these prominences, which is the essential and complex cause of the obstacles under consideration." No one ever doubted this who attributed the cause to muscular contraction, for if the bones were perfectly smooth and presented merely plane surfaces, without any irregularity, the difficulties would be very much less; but it is not the bony eminences of irregularity which push against the head of the bone, but the head of the bone drawn and fixed against the bony eminences by the action of the muscles, that produces the opposition, and therefore, after all, we return to muscular contraction as the true cause.

CASE OF MALFORMATION OF THE GENITALS, IN WHICH A CHILD, TWO MONTHS OLD, CHRISTENED, AND ALWAYS CONSIDERED AS A FEMALE, PROVED TO BE A BOY.

By HENRY TERRY, Esq., F.R.C.S., Surgeon to the General Infirmary, Northampton.

Lois Brown, of Mears Ashby, Northamptonshire, aged two months, was brought to the Northampton General Infirmary on the 9th of March, 1843, on account of a malformation in the organs of generation. The mother and grandmother, who came with the child, said that the external opening was closed, and the water came the wrong way, and that she was born so. On my first examination, it appeared to be a common case of imperforate vagina. There was, however, a little fulness, and a slight degree of prominence at the lower part of the supposed closed orifice, and this was the only peculiar circumstance which I observed. On proceeding to separate the adhesion, which required no cutting, and very little force, my utmost surprise was excited by the appearances which were presented to view. There was something which looked like a penis, and I immediately fancied that my patient was a case of hermaphroditism. I separated the parts more extensively, and more minutely examined those which had been concealed; a glans penis and prepuce were now discernible, and the penis was complete, though a good

deal confined and bound down to the neighbouring parts. The vagina was searched for, but in vain. The scrotum, with one testicle down, and the other descending, was gradually developed, and the little patient was presented as an entirely male child. There was a slight indentation at the orifice of the urethra, but the canal was impervious, and the urine passed through a little opening behind the corona glandis, just at the insertion of the frenum preputii. There was a large quantity of loose cellular substance covered by integument in the neighbourhood of the parts, so that even after the separation of all the adhesion, the slightest lateral pressure with the fingers gave again the appearance of a closed vagina, covering and entirely hiding the penis and scrotum as before.

I am at a loss to give any satisfactory explanation of the appearances which I have attempted to describe. It only appeared to me that from an exuberant quantity of surrounding soft parts, together with a retracted and rather confined condition of the penis, the two sides of the former had met, and formed an adhesion, but this had evidently happened before the birth of the child, as no doubt had ever been entertained as to the supposed fact of its being a little girl.

I visited the child the next day at Mears Ashby, and found him quite well, but the mother was in tears and great trouble, as she said she should be laughed at and ridiculed by all the village for not knowing a boy from a girl. I endeavoured to satisfy her on this subject by assuring her that her ignorance on this point was not greater than my own, and I offered to give her a statement of the facts of the case for the clergyman of the parish. The child has been frequently at the Infirmary since; the urethra is still impervious. I have made many attempts to introduce even the finest probe, but have not got it in further than a quarter of an inch. The urine passes through the false passage without inconvenience. The penis is still rather confined, and the same state of the surrounding parts remains; by very slight lateral pressure the almost perfect appearance of the female organs is again produced.

During the present tender age of the child it would doubtless be wrong to do any thing more respecting the urethra, but it will be eventually important to decide whether any thing can be done. I believe that the urethra is not carried through the glans, but terminates in the false opening behind that body, constituting the disease called hypospadias; and I fear that such a case admits of no remedy.

ON THE EMPLOYMENT OF THE ESSENTIAL OIL OF ALMONDS IN COOKING.

By EDWARD D. WALKER, M.D., Teignmouth.

TO THE EDITOR OF THE PROVINCIAL MEDICAL AND SURGICAL JOURNAL.

SIR,

The important case of fatal poisoning by the essential oil of bitter almonds, communicated by Dr. Bull, in a recent number of the Journal, brings to my memory the following circumstance, witnessed by me some years ago in the house of a friend. To many of your readers it may seem scarcely worth relating, and yet trivial as the narrative may be, to others it may possess no mean significance, as an illustration of the extreme ignorance, which I fear too generally prevails

amongst those who are in the habit of using the almond flavour for domestic purposes, of the qualities of the "perilous stuff." From this ignorance, and the unhappy facilities which the faulty state of our law permits to the most reckless and uninformed of obtaining this as well as all other poisons, even more serious consequences might result, than from its employment for criminal purposes. Anything therefore which can tend even slightly to expose this state of things more fully, seems to me not unworthy of attention, more especially just at this time, when, *Hew! quantum nobis instat perniciēs*," our rulers seem bent upon making matters worse—when those who are opposed in everything else to the author of the portentous new scheme of medical legislation with which we are threatened, cheered him on his announcement of his desperate purpose,—when parties, agreed in nothing else, seem disposed to join in letting loose quackery upon the land.

On the occasion to which I refer, a pudding was sent to table so highly flavoured with the bitter almond, that looks of distrust were exchanged amongst the party, and no one seemed disposed to commence the assault. A message was sent to the cook to enquire in what form she had used the flavour, but we all know that cooks, as well as poets, are somewhat of a "*genus irritabile*," and an impatient answer was returned, which threw no light on the subject. It may be supposed, therefore, albeit uncomplimentary to her professional skill, a tender point with most of us, that her delicious dumpling was partaken of with great moderation. Next day I prevailed upon her to show me the material she had used, when to my surprise, she produced a small bottle, containing the undiluted essential oil of almonds. Of course I explained to her its nature, and the danger of her making use of so deadly a poison for such purposes. But I laboured in vain, she could not be convinced, and was so persuaded of its harmlessness, that she declared her determination to *drink it all*, in order to prove her superior knowledge of a matter she thought entirely within her own department; and the silly creature continued so determined, that I really believe she would have carried into effect her mad purpose, and suffered the consequence,

"Like him who knew not poison's power to kill,
Until by tasting it, himself was slain;"

had I not bethought myself of an expedient by which she was perhaps saved from becoming the victim of her own folly.

There was in the house a favourite cat, and I suggested that its effects should be first tried upon him. Here was an honourable compromise. Accordingly the contents of the phial, which measured rather less than half a tea-spoonful, were mixed with half a tea-cupful of milk, and offered to puss. But he showed himself far the wiser animal of the two. Whether it was that like the dog in the fable, he distrusted such sudden generosity—

*Repente liberalis stultis gratus est,
Verum peritis irritos tendit dolos—*

or that the mess was too highly flavoured to suit his unsophisticated palate, I cannot exactly say, but he prudently declined to taste the "drugged posset." Alas! poor Tom's caution availed him not, and whilst two fellow servants were engaged in ruthlessly forcing a