

upon and softened, but not wholly destroyed, while the sixth vertebra was also partially fractured but no fragments displaced. The exact position of the injury had been recognized during life from the combination of symptoms above alluded to.

VI.—CASES ILLUSTRATIVE OF PERSISTENCE OF THE HYMEN.

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THE following cases, while presenting to the obstetrician much matter of interest, are of still greater importance to the medico-legalist, as they afford incontestible proof that persistence of the hymen is compatible with the wedded state, that its destruction does not necessarily follow even the calling of a prostitute, and hence, that its persistence after attempted rape must not be relied upon solely as evidence sufficient to disprove the charge.

CASE I.—A lady, aged 43 years, who had spent twenty-four years in the matrimonial condition, suffered from a swelling in the right iliac fossa, which, on careful examination by external palpation, appeared to be connected with the ovary of that side. In order, then, to ascertain exactly its relation to this and the other pelvic viscera, a vaginal examination was attempted, but at first no vaginal orifice could be discovered, the meatus being guarded by a perfect hymen having anteriorly a small aperture which permitted the escape of the menstrual flow. Careful examination further revealed a slight depression involving the anterior portion of the perinæum and the posterior portion of the hymen. This depression, evidently the result of frequent attempts at coitus was, under pressure by the finger, capable only of affording a cul-de-sac not more than three-quarters of an inch in depth, while its normal depth was but one quarter of an inch.

CASE II.—In this case the condition of parts observed in Case I. was also observed, but was greater in degree. A lady, aged 30 years, had been married ten years, but was

childless. She complained of all the symptoms indicative of prolapsus uteri. On a vaginal examination being made, the os uteri was found situated about an inch from the meatus. The os uteri presented to the finger a very ill-defined outline; and this, on careful examination, was found to be due to the intervention of a thin membrane between that organ and the finger. This membrane was then discovered to be but a persistent hymen, which, from frequent attempts at sexual intercourse, had become pouched, so as to give rise to the formation of a perfect cul-de-sac, which, in its normal state, was from three-quarters of an inch to one inch in depth, but under pressure, either by the finger or the speculum, was capable of being distended to the extent of about one inch and a half. This cul-de-sac, as in the former case, involved the posterior two-thirds or rather more of the hymen and the anterior portion of the perinæum, and its persistence was evidently due to the presence in the tissue of strong bands of fibrous or fibro-elastic tissue, which rendered the structure as a whole very resilient.

In Case I. no steps were taken to destroy the hymen, owing to the comparatively advanced age of the patient, as also to the fact that should pregnancy have followed (which, while improbable, was yet possible), the ovarian tumour might have led to a complication of no little gravity. Bromide of potassium was given in large doses, with a view to decrease the size of the ovarian tumour, or, at least, to prevent its further development. This treatment was continued for several months, the tumour being at the expiry of that time rather smaller than formerly. When last seen, patient was still much in the same condition. Her husband was a robust man, weighing 14 stone, and was in every respect well formed.

In Case II. the patient was placed under the influence of chloroform, and the hymen was then forcibly ruptured by means of a speculum. The uterus was then found to be not only prolapsed, but also retroverted and slightly retroflexed. The uterus was replaced in its normal situation, and there secured by means of a Hodge's pessary. In a few days, all

inconvenience arising from the operation had subsided, and the symptoms due to the prolapsus had entirely disappeared.

These two cases are then, I think, sufficient to prove that, even under circumstances the most favourable for its rupture, the hymen may remain intact, and if we remember that in cases of attempted rape the circumstances are less favourable—any struggling on the part of the female having a tendency to prevent perfect penetration—we are, I think, warranted in inferring that in such cases the proportion of those in which the hymen is not destroyed must be considerable.

Still further, however, to strengthen this position, I shall now shortly relate the particulars of three cases in which the hymen was found persistent in prostitutes. These three cases were found among about 1500, who, within the last few years, have applied for admission to the Glasgow Magdalene Asylum, Lochburn, Maryhill, and should subsequent experience establish this as the precise proportion, viz., 1 in 500, it will considerably affect the significance of persistence of the hymen as an evidence or a sign of virginity.

CASE III.—A. B., aged about 25 years, and for seven years a prostitute, applied for admission to the Magdalene Asylum. With a view to ascertain whether or not she suffered from any venereal or other disease of an infectious or contagious nature, she was subjected to the usual examination. In every respect she was healthy; but the hymen was perfectly entire, save anteriorly where there was a small aperture, barely sufficient to permit the passage of a crow quill. She stated that she had never suffered any inconvenience during her menstrual periods, that she had never contracted any venereal disease, and that she was perfectly unaware of there being anything abnormal or unusual in her conformation. In this case the hymen was firm but resilient, containing evidently numerous elastic and fibro-elastic bands.

CASE IV.—C. B., aged about 24 years, also a prostitute, had adopted this path of life at the age of 16 years. Having likewise presented herself for admission to the G. M. A., was,

on examination, found perfectly free from all disease; but presented a persistent hymen of a soft, but strongly resilient consistence, indeed, so much so was this the case that on making pressure with the finger, it afforded the sensation of small reduplications of mucous membrane being gradually thrust aside, but careful examination established the case as one of persistent hymen, in which the usually thin crescentic duplicature of membrane was greatly modified by the deposit in its substance of numerous muscular bands. She, like her predecessor, had never contracted any venereal disease, suffered no inconvenience during menstruation, and was perfectly unaware of there being any unusual condition of parts.

CASE V.—Like the preceding cases, this person, D. M., aged 30, had been a prostitute for 11 years, and applied for admission to the G. M. A., wishing to alter her mode of life. She had never suffered from any venereal affection, and presented a perfectly well-defined crescentic hymen of the usual size, but of very dense consistence—indeed, to the touch it seemed almost cartilaginous.

These cases, then, shortly reported though they are, are full of significance, pointing most distinctly to the fact that the persistence of the hymen, *per se* as a sign of virginity, must be viewed with great care, while it must, at the same time, be taken as one of the class of signs rather collateral than direct in influencing the decision as to whether connection has, or has not, taken place, or at least been attempted.

As adding still further proof in favour of the occasional occurrence of this rather abnormal condition, I have but to refer to one case which has come under observation, and which adds another to those already on record in which conception has taken place without rupture of the hymen.

These cases may be divided into those occurring in unmarried and those occurring in married females. In the majority of cases included in the first class, it appears that an explanation may be found in the fact that popular opinion holds it impossible for conception to occur without full penetration; and hence a certain degree only of penetration is in these cases admitted, and thus, if the hymen be at all

resilient, it may resist the slight pressure made upon it, while by means of the small anterior aperture the fructifying element may find its way to the cavity of the uterus, and thence to the ovum. But in the case of married females, constituting the second and smaller section, no such explanation will hold, and we are hence shut up to cases of what might, for want of a better appellation, be termed *genuine persistent hymen*, due to abnormal development of tissue in its structure. It is to this latter class that the following case belongs:—

CASE VI.—Mrs A., aged 29 years, had been married seven years before this her first confinement. When first seen she had been in labour about twelve hours. Vaginal examination being attempted failed to reveal any external orifice, and this rather peculiar phenomenon at once received explanation when a persistent hymen was discovered of such size and form as completely to occlude the meatus, save in its central part, where a small aperture was discovered sufficient in size to admit an ordinary sized crow-quill. She had no idea that such was the condition of parts, and seemed to have suffered no inconvenience during menstruation. Labour was tedious, but in the course of forty-eight hours the head of the child was found to be fully distending the perinæum. A crucial incision was then made through the hymen, and delivery effected by the use of the forceps, this being necessitated by the exhausted state in which the patient now was. Recovery was rapid, and the child, though born asphyxiated, was resuscitated. Mother and child are at present alive and well.

Such are examples of persistent hymen in which the persistence is due to an adventitious development of elastic, fibro-elastic, or muscular tissue. But there is another cause which may lead to the presence in the married female of a perfect hymen. The cause to which I refer has, by Dr Marion Sims, been termed *vaginismus*, and this affection may be defined as a peculiar state of parts whereby, either from excessive nervous supply, or a peculiar irritable condition of the normal supply, any attempt to consummate the

sexual act, or, indeed, any pressure made in the vicinity, causes the infliction of intolerable pain upon the female. This is an affection certainly much more frequently met with in females in whom the hymen has been destroyed, and in whom the seat of the affection is rather the *carunculæ myrtiformes*, but the cases which I have here to record are examples of the affection conjoined with perfect development of the hymen.

CASE VII.—Mrs B., aged 38 years, had been married thirteen years. Her husband stated that whenever he attempted performance of the sexual act, she suffered excessive pain and implored him to desist. She was in every other respect healthy. When first seen, patient seemed anxious to be cured, and had no hesitation in submitting to a vaginal examination, but no sooner did the finger touch the vulva than she cried out loudly, and sprang to the opposite side of the bed. After various unsuccessful attempts, it was arranged to visit again in about eight days, when chloroform should be administered, and the necessary proceedings adopted. On calling the following week, she objected to be placed under the influence of chloroform, and said she would much rather endure the pain, as she was firmly convinced she would not recover from the effects of the anæsthetic. An attempt was accordingly made to proceed without it, but beyond ascertaining that the hymen was perfect, nothing further could be learned, and no operation performed, on account of the intense suffering which the least manipulation of the parts induced. Since then she has been frequently seen, but she is still in the same condition as previous to her *formal* marriage, an event of fully eighteen years ago. Query. According to Scotch Law, was marriage in this case consummated, and might a decree of nullity of marriage be obtained?

The two following cases are perhaps more interesting, as in both the obstacle was removed, and the operative interference was rapidly followed by conception.

CASE VIII.—Mrs N., aged about 25 years, had been married four years. She stated that since her marriage

sexual intercourse had been entirely precluded by the extreme degree of suffering induced by any attempt at its performance. General health perfect. On examination, the parts were found very tender and sensitive, the very slightest pressure occasioning intense suffering. Patient being placed under the influence of chloroform, there was found in the centre of a persistent hymen, which was tense and unyielding, an aperture about the size of a crow quill. A bougie was thrust through the hymen, then one of larger size, then a small thick-glass speculum, and ultimately one of medium diameter. After the lapse of eight days, chloroform was again administered, and the dilatation continued till the largest sized speculum was introduced. Patient complained a little of pain, but this was perfectly relieved by the use of the atropine pessary. Within a fortnight recovery was perfect; she returned to her husband in Marseilles, and has since given birth to four children.

CASE IX.—Mrs M'N. has been married seven years. In all respects has enjoyed good health, but complains that any attempt at sexual connection is accompanied by pain so excessive as at once to necessitate desistance therefrom. On examination the hymen was found entire, with a small fissure about half-an-inch long in a slightly oblique direction. Here, also, as in most of the preceding cases, there was a small aperture anteriorly, by means of which the menstrual discharge obtained egress. Chloroform was administered, and an incision made through the hack or fissure, after which specula of various diameters were introduced, thereby perfectly destroying the hymen. In a few days recovery was perfect, and she is now the mother of three children.

These, then, may be taken as typical cases of vaginismus, an affection which may be said to be of but recent introduction into the literature of obstetrics, but one which deserves the close attention of the obstetrician. To these I might have added examples of cases of the same affection, but affecting persons in whom rupture of the hymen had already occurred, but, as such cases do not illustrate the subject in hand, I reserve them for future matter of remark.