

Observations on Parturition, taken from a Lecture delivered at the Theatre of Anatomy and Medicine, Marsden street, Manchester, October 3, 1832. By JOHN ROBERTON, one of the Surgeons to the Lying-in Hospital.

It has always been the policy of those who decry man-widwifery to instance the ease and safety of parturition in brutes, and in women amongst savages; and thence to infer, that the same process in civilized society would be equally safe and easy, were it only left (as they contend it ought) to the efforts of nature, and the assistance of matrons. These objectors, it would appear, forget that the practice they recommend was universally followed, in every country in Europe, till little more than a century ago; and that it was gradually abandoned, apparently, through the influence of increasing humanity and intelligence.

The assumed safety of parturition in brutes, of which I shall speak first, involves considerable fallacy. In brutes, it is true, we discover a wonderful degree of perfection in the performance both of the organic and animal functions. But this can be said of them in the wild state only. In that state they rarely exhibit varieties in any respect; that is to say, they very rarely deviate from the primal type of the species to which they belong. In colour, form, habits, and what is of much importance in the present argument, size, they are produced the same in successive generations. In a herd of bisons, for example, amounting perhaps to many thousands, it is generally impossible to detect even a single instance of deviation, in regard to colour, from the natural dun. In our common domesticated animals, a similar uniformity of type is soon produced, when they are turned loose to breed in the wilderness. This is seen in the horses and cattle which the Spaniards, selecting from the various breeds of their own country, introduced into the savannas of the new world. There they are found, in vast herds, not, as in the domesticated state, of various colour, and size, but of a brown bay, a colour common to a great number of wild quadrupeds; and in other respects presenting the uniform features of *fera natura*. These circumstances naturally lead us to infer that monstrosities, as well as diseases, must be unknown among wild animals, an inference near the truth; yet we shall err, in regard to this point, if we venture to generalise without a careful examination of facts; for although it be true that monstrosities and diseases are extremely rare in wild animals, various instances of both have been known, and, were our opportunities of observation greater, probably we should discover more. Camper, a high authority, assures us that he had in his possession specimens of malformation belonging to every species of animal: among others, a gazelle with two heads; also a serpent and a tortoise, each with two heads; and a lizard with the two hinder feet in one. In the great work of Daubenton, examples, I believe, are given of a similar kind. Of the diseases of animals, in their wild state,

we are not likely to know much; yet we are not without a number of observations on this point, for which I refer you to the works of Camper. I will merely mention one instance, on the authority of Adair. In the year 1766 an epidemic malady prevailed among the wild beasts, particularly the deer, in the remote woods of West Florida. The Indians, in their winter's hunt, found several lying dead; some in a helpless condition, and others fierce and mad.

The condition of domesticated is extremely different from that of wild animals. No sooner are the natural habits of animals modified by the influence of man than a great variety of changes rapidly ensues. Each particular species soon presents, within itself, remarkable diversities, in colour, instinct, figure, and size. They now become liable to numerous diseases; and exhibit likewise almost as great a variety of congenial imperfections as man himself. But of all the organic changes to which they are subject, none is more prominent and worthy of our attention than that which respects the generative system. Frequent sterility now succeeds to uniform fecundity, and abortion, in some species, becomes so frequent, under particular circumstances, that the disposition is even thought to be propagated by a specific contagion. Be this as it may, it often pervades an entire dairy: and is extremely difficult of remedy. So far, again, from bringing forth their young with uniform ease and safety, the mortality resulting from parturition, under certain circumstances which I shall specify, is incomparably greater than it is in our own species. And even when the circumstances are of the most favorable kind, this act is attended with more or less pain, and, occasionally, with risk to life.

Without enlarging on the subject of comparative obstetrics, (although I must be permitted to say that I regard it as one of high interest to the student of midwifery,) it may be well if I make a few remarks, and state one important fact respecting it, derived from a practical person every way worthy of credit.*

Of course, those domesticated quadrupeds only which bring forth one, or not more than two or three young at a birth, call for remark. In such as have a numerous litter, as the sow, the young are individually so small, relative to the size of the mother, as to preclude almost the possibility of causing much difficulty in the birth. Notwithstanding this, I have known parturition fatal both to the cat and the bitch, which, as you know, have a numerous offspring.

It may, I think, be regarded as a law, that the parturient act, in domesticated animals, is easy or otherwise, in proportion as they are subjected to a more or less laborious life. Hence the mare, which is seldom permitted to be idle, rarely dies in parturition. It is in the cow and the sheep, particularly the former, that the act of bringing forth their young is so often attended with difficulty, and even with fatal consequences. In country dairies, where the cow is daily abroad in the open air up to the period of calving, and feeds upon herbage, parturition is comparatively safe and easy; less so, however, I am inclined to think than in mankind; but in town dairies (you are aware that in most great towns very large dairies are kept,) the act of parturition is incredibly dangerous, so much so that it is seldom the dairy proprietor chooses to keep the same cows for more than one year. During each season he sells off his stock, and supplies their places with cows in-calf, purchased from the country farmer; and these he does not admit into the cow-house till they are within eight or ten days of the period of calving. When, on account of her good qualities, he is induced to retain a milch cow year after year, the risk in parturition, and from its consequences, is reckoned equal to one fourth of the value of the animal.

Thus we find that in town dairies, where the state of the cow is wholly artificial, (that is, where she is never turned out to take either air or exercise, and is fed not on herbage, but chiefly on warm boiled grains,) parturition is attended

* The individual alluded to was for some time the superintendent of a dairy in the neighbourhood of Edinburgh, consisting of about three hundred cows.

with extraordinary risk; a risk fiftyfold greater than in the human kind, even under the most unfavorable circumstances that are known.

The next arguments on which the opponents of midwifery, as a science, found their objections, is the ease and safety of labour among such savages as the American Indians and the New Hollanders, where, say they, men-midwives are unknown, and woman, like every other animal, brings forth her young by the aid alone of that all-sufficient midwife, nature. Whether or not it be true that women, in this state of society, bear children with more safety than those of our country, we shall presently inquire. I readily admit, however, that the women of savages experience less pain during parturition, and, comparatively, still less danger and suffering in the puerperal state, than the women of civilization. This is owing to a variety of causes which may easily be pointed out. In a rude condition of society, a great proportion of females, and especially such as are feeble and deformed, are destroyed in infancy. This practice obtains, more or less, in perhaps every tribe of barbarians of whose manners we possess any knowledge. Hence, of course, the healthy, vigorous, and well-formed alone are reared, and live to become mothers. The life also of women, in such a condition of society, is incredibly hardy and toilsome; and this, by at once invigorating the organic frame, and limiting and repressing the influence of the mind on the body, renders them of a singularly irritable constitution, almost in the degree of wild animals. Far less sensible to pain than the civilized portion of their sex, they speedily recover from severe wounds, and other bodily injuries, with little or no sympathetic fever. It is of such women as these that James, the scientific narrator of the American expedition from Pittsburg to the rocky mountains (when speaking of the Indians in their native wilderness) remarks: "During pregnancy the squaw continues her usual avocations, and, even in its most advanced state, she neither bears a lighter burden on her back, nor walks a shorter distance in a day, than she otherwise would. If on a march she feels the pains of parturition, she retires to the bushes, throws her burden from her back, and, without any aid, brings the infant into the world. After washing in water, if at hand, or in melted snow, both herself and the infant, she immediately replaces the burden upon her back, weighing perhaps between sixty and one hundred pounds, secures her child upon the top of it, protected from the cold by an envelope of bison robe, and thus hurries on to overtake her companions."

If we are to believe many who have lived among barbarians, and written of their habits and peculiarities, childbirth in them is uniformly easy and expeditious; nearly as much so as the performance of the simplest of the animal functions. A considerable variety of recent, credible, and highly valuable evidence on this point, however, (furnished chiefly in casual hints and allusions, which is by far the most unexceptionable kind of evidence,) leads me to form a very different conclusion. So far is parturition from being easy, expeditious, and safe, in every instance, we have reason for thinking that truly difficult labours are proportionably as numerous with them as in our own country. Where there is no malposition of the fœtus or other impediment, no doubt parturition is a lighter affair with the barbarian than with the European. Of this, speaking generally, there can be no doubt; and the reason I have already briefly stated: but, in exemption from the usual causes of impeded labour, properly requiring the aid of science for the safe and speedy delivery of the patient, I believe there is either no difference at all, or, if there be, it will be found in favor of the greater exemption, from such causes, of women in a state of civilization. The blows and other ill usage in various ways which the women experience at the hands of their husbands, and the heavy burdens which they are in the daily habit of carrying up to the last hour of utero-gestation, cannot, in all cases, fail in producing either malposition of the fœtus, or injury to the connexion between the fœtus and the mother. Besides, although it be true that few instances of decrepitude, or of other defect in the bony system, are found in a rude state of society, yet

there is no doubt that such defects do exist. M. Rollin, surgeon, in the *Voyage of La Perouse*, in his account of the physical peculiarities of the natives of California, assures us that he did not see among them one instance of rickets; and a similar remark is made by many observers regarding other barbarians: but what of this? A traveller might visit, and attentively survey, an extensive district of our own country, and behold a far more numerous population than M. Rollin, and the others I have alluded to, saw, and yet, probably, not discover a single case of hunchback, or rickety deformity. As a set-off to such sweeping observations of travellers, I may mention a few facts that are brought out, incidentally, in the narratives of some of the most credible authorities we possess, respecting the ruder portion of our species. Thus, when describing the wild tribes bordering on the Rocky Mountains, Mr. James informs us that in the Oto nation they saw a deaf and dumb boy; an adult with a curved spine; and another with an inflexible knee, the leg forming a right angle with the thigh. Among the the Kaskias they saw likewise one old woman with a distorted spine, who, Mr. James remarks, when young, had probably suffered from rickets. Scrofula, the party found, was not uncommon. In Captain Lyon's *Journal of his Voyage to the North Pole*, mention is incidentally made of an Esquimaux boy, of five or six years old, who, in addition to mental imbecility, was dumb, had rickets, and epileptic fits. In the account of the missionary voyage of the ship *Duff* to Otaheite, (this was at a period when the islanders had as yet borrowed nothing from civilization,) the writer remarks, that a person knock-kneed or bow-legged was rarely to be found. His party saw only three hump-backed children in the whole island, and they were boys. It would, of course, be vain to conjecture how many deformed girls the barbarity of the natives may have consigned to the grave, beyond the observation of the missionaries. In speaking of the natives of Tongataboo, Captain Cook remarks, that they have few natural deformities. He, however, saw two or three with the feet bent inward. By a little more industry in searching for similar facts, others, I dare say, might be discovered; but these are sufficient to demonstrate the probability, that distortion of the pelvic bones may exist in women of even the rudest tribes of whom we possess any knowledge.

But is it really true that barbarian women have always easy and safety parturition? The contrary, I am inclined to think, will be found true. I have already admitted they suffer very little from the effects of labour, just as they would suffer little from a severe accident, or a surgical operation. But in a hundred instances of labour among the Indians of the Rocky Mountains, or the New Hollanders, I see no reason to conclude that the proportion of preternatural cases would be found to be smaller than in Europe: perhaps it would be found to be greater. Although minute and specific information on this point is not to be attained, I have collected a number of remarks more or less directly bearing upon it. Long (a noted fur-trader), in his book entitled "*Voyages and Travels among the American Indians*," when descanting on the fortitude of the savages, mentions incidentally the fact of a young woman, of the Rat nation, being in labour a day and a night without uttering a groan; the force of example acting so powerfully on her pride as not to allow her to express the pain she felt. Another similar fact is stated in the *Voyage of Clarke and Lewis up the Missouri*. The wife of an Indian of the party was in labour, and suffering considerably, when one of the Indians gave her as a remedy some of the rattle of the rattlesnake, in powder, pretty much as we should give the ergot of rye. In Hearne's *Journal of his Expedition to the Northern Ocean*, he casually says, "here (mentioning the name of a place) we were detained two days, owing to one of our women being taken in labour." The instant that the woman was delivered, which was not till she had suffered for near fifty-two hours, the signal was made for moving." Mackenzie, also, in his well-known *Travels in the extreme North of America*, incidentally remarks, that, on a particular time, the Indian hunter

attached to the party returned, after a temporary absence, accompanied by his wife, leaving behind him his mother-in-law in a helpless state, with three children, and in labour of a fourth. It came out that she had been left "in a state of great danger." In the scientific expedition to the sources of St. Peter's River, its historian, Capt. Keating, states respecting the Potawatomis, a tribe with which he associated for some time, and concerning whose manners his party gained much curious information, that labour was seldom fatal among them, but that many instances had occurred in which the child was so long in being born, that it was putrid when expelled. The same writer informs us, that, in answer to inquiries made among a tribe of Indians, called Sanks, concerning the usual duration of labour, he was told that the pains of labour continued, in some cases, as long as four days. In general, however, labour continued a very short time. From the Dacotas, another Indian tribe, the same party learned that parturition among them, though generally easy, in some cases lasted from two to four days. In Franklin's *Overland Journal*, we have another incidental notice of labour in an Indian. A Chipawyan woman fell in labour, in the woods, of her first child, and, on the third day after, died. In Krantz's account of the manners of the Greenlanders, we have an allusion to parturition which deserves mention. He is speaking of the opinions which these savages hold regarding the qualifications that entitle them to gain admission to heaven: among others, those, it appears, find entrance who had been drowned in the sea, or have "died in childbirth."

The next fact I shall mention has reference to a people the lowest of any in the scale of civilization; I allude to the New Hol'anders. Among them a man is not permitted to approach where the act of parturition is being performed. Collins, an excellent observer and writer, informs us, that he had the curiosity to get a European woman to be present at a native labour. By this person it was remarked that, while one female poured cold water, from time to time, on the abdomen, another was busy performing some trifling charm. How long the labour lasted is not said; but after it was over, the poor woman appeared much exhausted, and fell across a fire that was in the place, happily without receiving injury.

In concluding the list of facts in support of this branch of my argument, I have the gratification to present you with what I cannot but regard as valuable and interesting information concerning parturition, as it occurs in the islands of the South Sea, privately furnished me by Mr. Ellis and Mr. Bourne, missionaries, who resided (particularly the latter) a great many years in those islands of the Pacific where missions are established. In order to elicit the information I wanted, in a clear and precise form, I took the liberty of putting in writing the following questions, which I shall give you seriatim, with the replies:

1st. Is parturition, in general, speedier, easier, and safer, in the South Seas, than it is among our own peasantry? Mr. Bourne's reply: "Parturition in the South Seas is, in general, easy, speedy, and safe, even to astonishment. Immediately after delivery, the women are generally able to arise, take their infants in their arms, and bathe themselves and infants in some neighbouring rivulet. A servant to one of the missionaries, whose business it was to catch and milk her master's goats, was confined with a child on the Sunday evening, and on the Monday morning caught and milked the goats as usual." Additional reply by Mr. Ellis: "Parturition is remarkably easy: many instances of this came under our notice. A servant of ours was engaged at washing one morning; labour came on about nine o'clock; she went home; and in the evening, walking, came again, with the child in her arms. Formerly they used, immediately after delivery, to sit upon a pile of hot stones covered with herbs, and when this had produced profuse perspiration, would rush into the sea within half an hour after. I am disposed to think civilization does make childbearing more difficult, or makes the mothers feel its inconveniences more."

2d. Have very protracted, dangerous, or fatal instances of childbearing come to your knowledge? By Mr. Bourne: "Protracted, fatal, and dangerous instances of childbearing have come to my knowledge; although such are not very frequent." By Mr. Ellis: "Protracted and dangerous labours have generally been occasioned by mal-presentations; the most have been shoulder presentations, or the protrusion of the arm."

3d. Have you observed parturition to be more or less difficult according to the state of civilization: easier, for example, in New Zealand than in Otaheite? By Mr. Bourne: "Parturition is as easy in Tahiti as in New Zealand."

4th. Do the South Sea women employ a class of females in any respect answering to that of our midwives? By Mr. Bourne: "No class of women are employed in the South Seas answering to midwives." By Mr. Ellis: "There were a number of women celebrated for their skill in aiding difficult labours, but in ordinary cases their aid was not sought."

5th. In protracted and difficult labours, what means do they use to hasten delivery? By Mr. Bourne: "In protracted and difficult labours, no means are used to hasten delivery. Every thing is left to nature. The missionaries have saved many in difficult labours, that otherwise would have died. I knew of one fatal instance, and many others would have occurred but for the missionaries." The reply of Mr. Ellis is in a trifling degree different: "In difficult labours, the patient was fixed on two stools, while a friend supported the back: or, the patient sat on the extended thighs of an assistant, while another person endeavoured by pressure, and other mechanical means, to promote delivery. We have reason to believe several must have died in childbirth but for the aid of the missionaries."

After so copious an induction of facts, I need say little more, I presume, to convince you that the act of parturition, among the women of rude nations, is not, in the absence of obstetric science, uniformly safe and easy: but, on the contrary, notwithstanding the degree of perfection in which the organic functions in general, and of course the uterine, are performed in them (in which respect they are more favored than the women of civilization), protracted, and even fatal labours are at least equally numerous as they are with us.—*Med. Gazette.*