ON THE
EFFICACY
OF THE
BARK OF THE POMEGRANATE TREE,
IN
CASES OF TÆNIA,
By P. BRETON, Esq.
SURGEON TO THE RHAMGUR BATTALION IN THE EAST INDIES.
COMMUNICATED BY
DR. ROGET.

Read March 14th, 1820.

HAVING observed in Dr. Fleming's catalogue of Indian medical plants and drugs, that the decoction of the bark of the pomegranate root is ranked as an efficacious remedy for the removal of the tape worm, I had afterwards an opportunity of putting its effects to the fairest test of experiment.

For several days my Kidmutgar complained of symptoms which I conjectured to be those of tænia.

The fact having been subsequently confirmed by the appearance of fragments of the worm, I immediately determined on making personal trial of the remedy prescribed in Dr. Fleming's book.

Accordingly I prepared a decoction of the fresh bark of the root of the pomegranate tree, by boiling two ounces of it in a pint and a half of water, to three-fourths of a pint, and when cold, I administered a glassful of it at 8 A. M. repeating that quantity every half hour, till four doses were taken. About an hour after the last dose, an entire *tænia* was voided alive, measuring nearly eight feet in length.

It may be worthy of remark, that in this instance, the decoction occasioned only a very trifling nausea ; notwithstanding which, it had the effect of dislodging and bringing away the worm entire at the expiration of three hours from the first taking of this remedy.

I transmitted to Dr. Fleming an account of this case, with the view of adding one to the number already communicated to him by others, in proof of the efficacy of the decoction, when prepared with a smaller quantity of the bark than is usually prescribed. This is certainly a fortunate circumstance, as it obviates any derangement of the system, or any unpleasant sensation what-

ever, excepting only a very trifling degree of nausea.

CASE II.

May 3, 1811. Gheesa, a native, says that, for a long time he had experienced sensations which induced him to believe he was troubled with worms, and for the last four months he had actually been in the habit of passing fragments of them.

The species of worms of which he complained, having been ascertained, I thought it a fair opportunity of trying the effect of the *dried* bark of the root of the pomegranate tree; and accordingly I prepared a decoction, by boiling two ounces of it in a pint and a half of water to three-fourths of a pint, of which I administered a wine glassful at 8 A. M., repeating that quantity every half hour, till four doses were taken. About ten o'clock the man complained so much of sickness at stomach, giddiness and uneasy sensations in his bowels, that I was deterred from giving him a fifth dose. About half an hour after 10 he complained of faintness, and vomited a little. A few minutes after 11 A. M. he voided an entire tænia alive, measuring nineteen feet two inches in length. Immediately after passing the worm, he was affected with faintness and universal tremor, and felt sick for several hours after.

This case affords abundant proof of the efficacy of the *dried* bark of the pomegranate root, and of its great activity in removing tænia. It seems also to warrant the conclusion, that the decoction made of two ounces of the *dried* bark is rather too powerful, and that the exhibition of it may, possibly, be attended with some danger. I am therefore of opinion, that a smaller quantity of the *dried* bark would answer the same purpose, without exciting a train of sensations so distressing in themselves. This inference is collaterally supported by the circumstance of the *recent* bark sustaining a considerable diminution of weight by the simple process of drying in the sun, so that by the dissipation of its aqueous or sappy particles, its active powers are condensed and united. To ascertain precisely the difference of weight between the fresh and dried bark, I examined a number of papers, each containing two ounces of the recent bark, taken indiscriminately out of a basket, and found that the medium loss of weight of each paper in drying, amounted to seven drachms.

The patient above-mentioned is a butcher by trade, of a robust constitution, and forty years old. The quantity of decoction given at each dose was two ounces, measured by a graduated glass measure.

CASES III & IV.

May 4th. Peer Bukhs, a boy about seven years old, and Phursand, a boy about ten years old, had passed fragments of tænia for upwards of six weeks.

At 8 A. M. they commenced taking one ounce of the decoction of the dried bark of the pomegranate root, (made by boiling one ounce and a half of it in a pint and a half of water, to three-fourths of a pint,) and repeated this quantity every half hour, till six doses were taken, without however any other disagreeable effect, than a trifling sickness at stomach, and a little vomiting three or four times. In consequence of the vomiting, I thought it prudent to suspend a further use of the decoction. At noon, on finding that the children had a good deal recovered from their unpleasant sensations, and conceiving it probable that the remedy would in this instance fail to produce the desired effect, in consequence of the children having rejected their medicine twice or three times immediately after taking it, I determined on preparing a little more of the decoction, by boiling half an ounce of the dried bark, in twelve ounces of water, to six ounces. This I administered as before, in doses of half an ounce to each of the boys, at 1 P. M., at half past one, and at 2 P. M. Shortly after, they both complained of considerable giddi-

ness and faintness, which induced me to desist from a farther repetition of the decoction.

At about 5 P. M. however, or three hours after the last dose, I had the gratification to find, that one of the boys (Peer Bukhs) voided a broad thick tænia, measuring fifteen feet four inches in length; at a little after six, the other boy (Phursand) passed a similar tænia, entire and alive, measuring fourteen feet two inches.

There was so little variation in the external expression of feeling of these two children, and the general effects of the decoction were so similar in both, that for the sake of brevity, I have preferred reciting the two cases together. But it may be observed, that a temporary suspension and renewal of the medicine may be successfully adopted under similar circumstances.

CASE V.

May 5th. Jhamoo, a boy aged nine years commenced at 8 A. M. taking twenty grains of the pulverized bark of the pomegranate root, mixed with one ounce of water, repeating this quantity every hour, till five doses were taken. At forty minutes after twelve, an entire tænia was brought away alive, measuring nine feet eight inches in length.

CASE VI.

May 5th. Jumbee, a girl ten years old, took at 8 A. M. the same quantity of the pulverized bark mixed with an ounce of cold water, and repeated the dose every hour till noon. At 24 minutes after 1 P. M. a *tænia lata* was discharged alive, four feet nine inches long. The next morning at about 9 A. M. an entire *tænia solium* was voided dead, measuring nine feet ten inches in length.

In these two instances a little nausea only was occasioned, and three or four copious motions in the course of the forenoon.

These two cases furnished positive proofs, that the powder of the bark of the pomegranate root is equally efficacious with the decoction of it, either in its dried or recent form. This is really a fortunate discovery, because it seems to operate mildly when administered in this form, and is of great importance with reference to economy, for in these two last cases, only ten scruples of the pulverized bark were expended, whereas, if the decoction had been prepared, twelve drachms of the bark would have been consumed.

CASE VII.

May 6th. Soobhun, aged 22, who had for many years continued to pass small portions of the tape

worm, took at 8 A. M. two scruples of the powdered bark of the pomegranate root, mixed with two ounces of water, and repeated that quantity every hour, till six doses were taken without any other effect than trivial nausea. At a little after 4 P. M. he voided a *tænia lata* alive, six feet seven inches long.

CASE VIII.

May 8th. Bundoo, aged 30, who had passed fragments of the worm for upwards of five years, took at 8 A. M. two scruples of the pulverized bark mixed with two ounces of water, and repeated the dose every half hour till 11 A. M., when it was suspended in consequence of a little sickness at stomach and giddiness. At a little after one, an entire *tænia* was expelled, which measured fifteen feet three inches in length.

In this case I exhibited the powder every half hour, with the view of ascertaining whether it would cause a more speedy expulsion of the worm, than when administered every hour. The fact is verified in this instance, but no conclusive judgment can be formed from a solitary case.

Having procured live *tæniæ* (as well as fragments of them which had been passed previously to the ex-

hibition of medicine) I was very desirous of witnessing the effect of the decoction of the pomegranate root, and also of a mixture of the powder of it with water, when applied in immediate contact with them. The instant they were plunged in these preparations, they writhed, and otherwise manifested great pain, and died in the space of five minutes. In plain water these worms will live several hours after expulsion.