Observations on the management of tedious labour, with an account of the number of cases that occurred in the Lying-In Hospital, Dublin, from November 1800 to the 31st July 1816 / by John Breen.

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THE

EDINBURGH

MEDICAL AND SURGICAL JOURNAL.

1. APRIL 1819.

PART I.

ORIGINAL COMMUNICATIONS.

I.

Observations on the Management of Tedious Labour, with an Account of the Number of Cases that occurred in the Lying-in-Hospital, Dublin, from November 1800 *to the* 31*st July* 1816.* By JOHN BREEN, M. D. late Assistant to that Institution, and Licentiate of the King and Queen's College of Physicians.

THE principal part of the following paper was published in the year 1808, in the Dublin Medical and Physical Essays. The facts, adduced in support of the conclusions, occurred in the Lying-in-Hospital of this city. The objects of the publication were, first, to approximate towards ascertaining the greatest length of time, for which we might confide in the efforts of nature, in a tedious labour, when the head presented; and secondly, to prove that it might be laid down as a general practical

* The writer terminated the period for which he was elected assistant in August 1806.

rule, that, during such a labour, for a period not exceeding thirty hours, unless accidental circumstances occur, the patient will go on with safety.

By accidental circumstances are understood rupture of the uterus, puerperal convulsions, disease prior to the commencement of labour, preternatural presentation, and hæmorrhage. It will be demonstrated, by a deduction from 11,695 cases, that the occurrence of any of the casualties in this formidable list is so rare as not to affect the general reasoning.

At the period of first publication, it was the intention of the writer to have made that essay the first of a series on general subjects of midwifery; therefore, a number of facts not very strictly connected with the title of the paper were brought together. The discontinuance of the Dublin Essays shortly after this publication, and the pressure of a harassing profession, have hitherto delayed the fulfilment of that intention.

A republication, though in a somewhat different form, seems warranted by the reference of Mr Burns to the tables, in his Principles of Midwifery, page 242, in which, however, he has not sufficiently adverted to the end for which they were constructed; and by the repetition of Mr Burns's reference in Dr Merryman's Synopsis.

The terms tedious labour, when used in this paper, signify labour where the head of the child presents, and a period exceeding thirty hours elapses, from the commencement to the termination. Every practitioner of midwifery must acknowledge the importance of the treatment of this species of parturition. In the various other embarrassing circumstances that occur to the accoucheur, the principles which should regulate his conduct are more fixed, and nearly demonstrable; and numerous well authenticated cases are on record to guide his judgment. When the patient's sufferings are so long protracted, she and her friends become uneasy and anxious. The practitioner, unless he has reason to expect a speedy termination of the case by the efforts of nature, will begin to feel apprehensions lest he should be under the necessity of having recourse to instruments. A moral question also, of very serious importance, sometimes comes under consultation, as cases occur where the means best calculated to relieve the parent are incompatible with the safety of the child. In choosing the time of affording extraordinary assistance, it should be kept in constant recollection, that even when some disproportion exists between the pelvis of the mother and head of the child, the long continued action of the uterus gradually compressing and elongating that part, will expel a living infant where either the

forceps or lever would do so much violence as to injure the parent and destroy the child.

That the reader may have an opportunity of estimating the fidelity of the statements contained in this paper, it becomes necessary to give an account of the Lying-in-Hospital of Dublin. It owes its institution to the exertions of the late Bartholomew Mosse, M. D. and was opened in December 1757 for the reception of patients. From that period to the 31st of December 1807, there have been delivered 59,354 women of 31,559 boys, 28,882 girls, 1030 have had twins, 19 had triplets, and one had four children at a birth, 621 women died, and 3266 children were still-born.* By the benevolent regulations of the institution, the gates are at all hours open for the admission of patients, who are not under the necessity of procuring recommendations. The governors are incorporated by charter, and limited in number to sixty. The general management of the patients is more particularly committed to the Master, who has two Assistants chosen by the governors, on his recommendation, joined with him in the care of the hospital. There are also six male pupils generally residing in the house, each of whom continues for six months. The pupils have the freest access to the wards, and to the hospital books. A considerable proportion of these pupils commence their attendance at the Lying-in-Hospital, after a regular medical education, and having either taken the degree of Doctor of Medicine, or having received letters testimonial from the College of Surgeons in Ireland. The Master, by the enactments of the charter, cannot hold his situation for a longer time than seven years, and having served that period, cannot, on any future occasion, be re-elected. By similar clauses the assistants hold their situations but for three years. In the election of master, the governors are bound to give a preference to those who have been assistants. The late Dr Kelly was master of the hospital during the interval, more particularly noted in this paper. The assistants, in the order of seniority, were Dr Ousely, Dr Labatt the present master, Dr Fergusson, and the writer of this paper, together with Mr A. Johnston, now Professor of Midwifery to the College of Sur-

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* The proportion of children brought forth by such a number of women appears to be greater in Ireland than in any other country, from which we have published accounts of the number of females having plurality of children. On this subject, see a paper of Dr Gartshore, in 77th Vol. Transactions of the Royal Society of London. Also one by Dr Bland in the 71st Vol. The proportion in the hospital, Paris, as appears by Madame Boivins, was 1 in 129, in ours 1 in 56.

geons in Ireland. The hospital books, from which the statements of this essay are extracted, were kept by these gentlemen. Two of the number, Drs Labatt and Fergusson, were joint editors of the Dublin Essays, in which publication the writer first communicated his opinions.

Between the commencement of November 1800, and the end of July 1806, 11,695 women were delivered, of which number 148 died from the following causes:

Fever, including Puerperal and Typhus,	46
In consequence of tedious labour, without use of instruments,	23
After tedious labour, where instruments were used,	18
Miscellaneous causes, which include Mania, Dysentery, organic affection of the heart, Pneumonia, &c.	14
Spontaneous rupture of uterus,	12
Hæmorrhage,	9
Phthisis Pulmonalis,	7
Puerperal Convulsions,	6
After hand and shoulder presentation,	6
Twins,	5
Triplets,	2
Total Deaths,	148

It is necessary to observe, that no general inference as to the mortality of women dying in labour can be drawn from this statement, as by necessary consequence of the system of the institution, women have been received in every disease to which females, during pregnancy, are liable, and even on the verge of dissolution, from previous mismanagement and illness. In 1803 likewise, the puerperal fever was epidemic in the hospital. In 1804, the number of beds was increased, and has been since further increased, which will certainly tend to diminish the frequency both of puerperal and typhus fever.

Tedious labour, terminated by the efforts of nature without instrumental or manual assistance, took place 290 times in the 11,695 cases. A few cases of plurality of children took place, that might be referred to this head; but, as it was the more common practice of the hospital in twin cases, to leave the expulsion of the second child to nature, after rupturing the membranes, where either the head or breech presented, I do not class such occurrences with tedious labour. Of the 290 there were 196 cases of first children, and 137 living children were brought forth. The remaining 94 had born a child or children before, and 67 living children were produced by these 94 patients. The deaths in the 290 cases were 23, the number

of living children born by these 23 was only seven. I have constructed the following tables, in order to give an accurate and comprehensive view of these facts.

The Table, No. I. shews the length of time the patients who brought forth a first child in tedious labour were ill. The periods of time are distributed in intervals of ten hours, beginning from between 30 and 40 hours, and marking every intermediate space of 10 hours to between 110 and 120 hours. Under each period of time the number of women who were delivered is stated; the number of living children born by these women; and lastly the deaths.

Table—No. I.

First Children.

Between	30 & 40	40 & 50	50 & 60	60 & 70	70 & 80	80 & 90	90 & 100	100 & 110	110 & 120
Women	34	102	11	8	24	4	12	0	1
Living Children	27	72	8	5	15	3	7	0	1
Women Dying	1	8	1	1	2	0	2	0	0

Thus, in the preceding table under the figures 30 and 40 in first division, which express between 30 and 40 hours' labour, are the numbers 34, which shew that there were 34 women between 30 and 40 hours in labour of their first child, and that of this number 27 had living children, which is stated in the third division, and the casualties of the women are expressed in the fourth division, which exhibits one death among the 34. Every succeeding column is to be understood in the same manner.

Fifteen deaths in 196 cases of tedious labour of first children are stated in Table, No. I. of which an account is now to be given.

The death in the first division proceeded from typhus fever.

Two of the eight deaths in the second division appear to have been chiefly caused by ill treatment before admission, one ill treated by her husband, the other by a midwife. One died of typhus on the 19th day after delivery; one of puerperal fever; one of diarrhœa and difficulty of breathing on the ninth day after delivery. One is stated in the book to have died of debility, but no marked disease. The cause of the death of one is not accurately recorded; but I have reason to believe it proceeded from debility. The remaining death, not yet accounted for, arose from phrenitis.

The death in the third division arose from debility 30 hours after delivery.

The death in the fourth division, fever on the 14th day after delivery.

Both the patients whose deaths are marked in the seventh division died of fever, one on the 10th day. The day of the death of the other, who was delivered of a dead girl after being 100 hours in labour, is not accurately noted.

Table—No. II.

Between	30 & 40	40 & 50	50 & 60	60 & 70	70 & 80	80 & 90	90 & 100	100 & 110	110 & 120
Women	23	48	6	1	9	0	2	0	1
Living Children	19	36	4	0	7	0	0	0	1
Women Dying	2	5	0	0	0	0	1	0	0

It now remains to give a concise account of the eight deaths in Table II.

In the first division one died of typhus fever on the eighth day after delivery; and, from recollection and the best account I can obtain, the other laboured under disease on admission.

Three among the five deaths in division the second arose from puerperal fever. One from debility thirty hours after delivery; and the other was under the care of a midwife, and ill treated before admission.

For the remaining death, the patient was ninety-six hours ill, and died of fever on the third day after delivery.

By the preceding account of deaths it will be seen, that there were eight cases of fatality from typhus fever. These may be considered, in a great measure, to have died independent of tedious labour, which, I conceive, acted merely as a predisposing cause to the disease. At the same time it is obvious that the chance of recovery in an attack of typhus fever is much greater after an easy labour than after a difficult. In private practice a similar occurrence is not likely to take place.

In the 11,695 cases, exclusive of convulsions, hæmorrhage, and ruptured uterus, instruments were used forty-four times. The following tables will, at a view, shew the length of time the women were ill, and also exhibit the mortality after their use.

The Table, No. III., shews the number of hours the women who were delivered with instruments, and who recover-

ed after their use, were in labour, the times divided into partitions of five hours.

Table—No. III.

Less than 30 hours.	Between	30 & 35	35 & 40	40 & 45	45 & 50	50 & 55	55 & 60	60 & 65	65 & 70	70 & 75	75 & 80	80 & 85	85 & 90	90 & 95	95 & 100	100 & 105	105 & 110	110 & 115	115 & 120
1 Woman	Women	1	1	0	3	3	0	0	0	5	1	1	1	0	2	0	1	0	0

The Table, No. IV., shews the same facts with respect to the women who died after the use of instruments, that the Table, No. III., shewed with respect to those who recovered.

Table—No. IV.

Less than 30 hours.	Between	30 & 35	35 & 40	40 & 45	45 & 50	50 & 55	55 & 60	60 & 65	65 & 70	70 & 75	75 & 80	80 & 85	85 & 90	90 & 95	95 & 100	100 & 105	105 & 110
3 Women	Women	0	0	0	6	0	1	0	1	3	3	0	0	0	0	0	1

Of the eighteen who died four were sent to the hospital after being long under the care of a midwife, their strength much exhausted, and dissolution took place shortly after.

Two were delivered by instruments in consequence of acute inflammation occurring during labour; in one the cause of death was ascertained by dissection, and the inflammation seemed to have commenced in one of the ovaria. The other received an injury by a fall shortly before admission, and symptoms of abdominal inflammation were violent before delivery.

Mary Clarke, delivered in consequence of umbilical hernia, died shortly after delivery, was not more than twenty-four hours in labour.

Isabella Legget, somewhat deformed, delivered by instruments after being one hundred and ten hours in labour; was out of bed for some days, and considered free from danger, but was attacked on the seventeenth day after delivery by violent symptoms of internal inflammation, which carried her off in twenty-four hours.

The remaining ten appear to have died either from the effects of debility or inflammation.

The proportion of deaths here stated will to many probably appear large; and whether the use of instruments, in the cases of some of those who died after tedious labour, as well as their

earlier use in the cases of those who died where they were ultimately applied, would be better practice, is not for me to determine; but as I have laid the facts before the public, nearly without comment or defence, it is submitted to discussion. I will, however, observe, that in an hospital, particularly when it is unhealthy, the chance of recovery after either tedious labour or instrumental delivery, will be less than under favourable circumstances in private practice. At the same time, I have no hesitation in avowing, that, in some of the cases where I was concerned, it was my wish after the termination of the case, and I believe also that of the other gentlemen with whom I was joined in the care of the hospital, that we had earlier delivered our patient. Such was my recorded opinion ten years since; and I am fully satisfied that we rather erred on the side of not using instruments sufficiently often, than on the side of using them too frequently. A comparison of our instrumental cases with those of the Hospital de la Maternité, Paris, as given by Madame Boivin in her Memorial de l'art des Accouchemens, Paris, 1817, and of Drs Bland's and Merryman's cases, as published by the latter in his Synopsis, London, 1814, will enable the reader farther to appreciate the accuracy of this opinion. In addition to the forty-four instrumental cases already stated, we had eighteen, which gives a total of sixty-two in 11,695, or one in one hundred and eighty-eight. In the hospital at Paris there were one hundred and twelve in 20,517, or one in one hundred and eighty-three. Dr Bland's cases were as one in one hundred and fifty-eight. Dr Merryman's as one in ninety-four.

It is unnecessary to enter with any degree of minuteness into the general plan of treatment of women in labour, which is well detailed in the different elementary books of midwifery in the hands of every practitioner. The propriety of opening the bowels is so universally known and assented to, that I should not allude to it, but for the purpose of strongly recommending, either in tedious labour, or when the labour is expected to be so, that purgative medicines should be trusted to rather than enemata. The ordinary house pill of the Dublin Lying-in-Hospital consisted of equal parts of scammony, aloes, and soap, made into a mass with jelly of soap. This form of pill was frequently administered, as was also sulphate of soda and castor oil.

I should next wish to urge, what indeed can only be necessary to the younger practitioner, that the accoucheur should with firmness resist unnecessarily attending on the patient when there is no prospect of her being speedily well. By yielding to this unnecessary attendance the practitioner becomes exhausted,

perhaps impatient, and disposed to hasten parturition when it ought not to be done, and from fatigue runs a risk of not being in possession of that coolness and presence of mind which may be so necessary for the benefit of the person committed to his care. A firm and temperate explanation of the causes of our conduct will generally satisfy the patient and her friends.

I have next to say a few words on the use of opiates. Whatever opportunity of observation I have had induces me fully to concur in the opinion of Dr Denman on the administration of opiates,* and against their early use. Good effects appear to me frequently to have followed the administration of from twenty-five to thirty drops of laudanum, given in the course of the second night's labour. Where sleep was not produced it often removed the anxiety and uneasiness which occasionally remain in the intervals of pain. Every person accustomed to observe the progress of tedious labour must have taken notice of a tendency in the action of the uterus to be partly suspended and again renewed. I would almost go the length of saying, that something like critical hours may be observed. By endeavouring to time the administration of an opiate with the tendency of the uterus to cease its action, I think I have observed that degree of refreshment procured, that in a labour, where it was apprehended the patient should be delivered with instruments, uterine action again commenced with vigour, in the course of a few hours, and the child has been expelled by the efforts of nature. Some practitioners are partial to the administration of opiates in small doses at short intervals. I have seen this method repeatedly tried, and observed its effects with attention, and I think without prejudice; but I cannot say that any good effects have followed from this mode of administration. I must add, that I have known laudanum to be administered in a full dose, under what I conceived favourable circumstances, without any good effects; but as it should be an universal rule never to administer opium in labour, unless the bowels be previously opened, as this precaution was always used in the cases here alluded to, I do not think it did injury.

Blood-letting, which many judicious practitioners recommend in tedious labour, was very rarely, if at all, tried in the Lying-in-Hospital, Dublin, for the purpose of expediting the tendency to dilatation of the parts concerned in parturition, or of obviating what may be denominated an excessive febrile tendency. The experience of twelve years has made me regret that I did not urge the more free and frequent use of the lancet in our

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* Introduction to Practice of Midwifery, Vol. II. p. 12.

hospital; and I now feel firmly convinced, that both theory and experience equally sanction the safety and advantage of venesection in tedious labour. I have heard the propriety of the practice ably inculcated, and strongly recommended, in the lectures of the present Professor of Midwifery in the University of Edinburgh.

I shall next speak of the attention proper to be given to the urinary secretion and discharge. The attendants are very apt to deceive us in their report of this latter circumstance; it is therefore the duty of the practitioner to ascertain it with precision, as I conceive it constitutes a very important circumstance in the treatment of tedious labour. I have known the catheter introduced three times in the course of a tedious labour, and no inconvenience follow from so long a retention. But I would wish to direct attention to a very diminished secretion, where only a small quantity of high coloured urine is found in the bladder on the introduction of the catheter. I do not recollect this circumstance being noticed before as taking place in tedious labour, at least I cannot call to my recollection having met with the observation in any writer on midwifery. I may here introduce the general observation, that as no memory can be so tenacious as to retain all the facts which are met with in the course of reading, whenever any fact, whose importance was before overlooked, is for the first time forcibly impressed on the mind, we are apt to draw the conclusion, that we then first notice what had escaped the observation of others. Whenever this symptom occurs, it seems to shew the existence of such a derangement in the system, as to warrant the expediting of the delivery.

This appears to be a proper place to mention, that I have met with two cases, in which I was called in, where the women were long under the care of a midwife, and in both, the bladder was amazingly distended with urine, but the urethra was so completely filled with mucus as effectually to stop the perforations of the catheter, and prevent any passing. I would conceive this circumstance sufficient to warrant an immediate delivery. In the cases here mentioned, one recovered, the other died. Since this was first published, a medical friend has suggested to me, that if I had carefully covered the perforations of the catheter with butter, this simple contrivance would have excluded the mucus, and the heat of the water in the bladder would have melted it, and allowed the urine to pass.* There

* A canulated catheter, invented by Mr Samuel Young, and described by

are cases in Smellie, where he appears not so anxious about drawing off the water as I would think it prudent to be; but, in his cases, it will be observed, that the secretion went on regularly, which I conceive to be a matter of the greatest importance.

A violent rigor coming on after labour has lasted 29 or 30 hours, I conceive to be a sign that inflammation is about to set in; if no other unfavourable symptom be present, I would not think it to be a sufficient cause for instantly ceasing to trust to nature, but on the occurrence of this symptom we should watch the slightest changes of our patient with the greatest attention. The alterations of countenance, I conceive, furnish a very important criterion in the treatment of tedious labour. It is difficult, if not impossible, to give any rules on this head, more than to recommend an attentive observation of the slightest variation, or tendency to the sinking of countenance. Violent and acute inflammation, characterized by severe and unceasing pain, with vomiting, occasionally occur. There are two cases noted as occurring amongst the 11,695; in each it took place within twenty-four hours from the commencement of labour; in both, labour was so far advanced as to allow immediate delivery by instruments; each case terminated unfavourably, and the cause of death in one was ascertained by dissection.

To support the courage and confidence of the patient, constitutes a highly useful and important part of the duty of an accoucheur, in his attendance on a tedious labour. I would conclude, that, where the secretions go on regularly, light food is taken in sufficient quantity to support the strength, and remains on the stomach; the pulse and countenance continue good; vomiting is not violent; the vagina is well lubricated with mucus; and uterine action causes the slightest advance of the child. It is astonishing for what a length of time we may trust to nature, and what difficulties the long continued action of the uterus will surmount. The parts being protected by mucus, is a matter of considerable importance, as this secretion prevents local injury and inflammation. No artificial application appears to me of much consequence in supplying this defect of secretion. Emollient injections thrown up the rectum, tend both to promote the secretion here mentioned, and to increase uterine action. When some disproportion exists between the pelvis and child's head, together with this tendency to local inflammation, manifested by

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him in the Medical and Physical Journal for December 1805, Vol. XIV. appears well calculated to obviate this inconvenience.

the dry and tumid feel of the parts, it is a very embarrassing and distressing occurrence to the practitioner, as, unless the child's head be lessened, a risk is run of the urethra and neck of the bladder being injured, and eneuresis for life being produced. I have hitherto rather considered this description of labour as an uninterrupted series of uterine action, which, in the more tedious cases, was by no means the fact, but, on the contrary, an almost total cessation sometimes took place. Under such circumstances, when the strength does not appear much exhausted, an opiate may be given, and after its effect, if necessary, a slightly stimulating injection generally will excite uterine action.

Treatment after Delivery.

On this head it will be only necessary to say a very few words, as I conceive the treatment of diseases, which occur after parturition, to be unconnected with my present subject. Attention to the state of the bowels, and the administration of gentle saline laxatives, we considered as our sheet anchor, if I may be allowed the use of this expression. This has been an established practice of the hospital for a great number of years. Shortly after allowing the patient time to recover from the first fatigue, if the bowels had been bound before delivery, or if opiates had been administered in labour, or immediately after, a gentle saline purgative was given. Fomentations of the abdomen, and local fomentations of the parts on the slightest appearance of a tendency to inflammation, were always had recourse to. When I now meet such an occurrence in private practice, on the inflammatory tendency being manifest, I direct blood to be taken from the arm, and immediately after bleeding, order a draught, consisting of six drachms of castor oil and two of rectified oil of turpentine. This mixture is rarely rejected by vomiting, even by such as have a great repugnance to castor oil. It, in most instances, quickly opens the bowels, and I know no other medicine that possesses so much efficacy in relieving flatulent distention, which is generally met with in such cases. As turpentine certainly communicates an odour to the contents of the bladder and rectum, it may not be considered an unreasonable hypothesis to suppose it to have some influence on the lochial discharge. In large doses I have not known it produce dysuria. * An opiate was not often given after either tedious labour or instrumental delivery; indeed, in the generality

* Turpentine was first recommended in puerperal fever by Dr Brennan of this city.

of cases, it was found, that the patient, after being properly settled in bed, was disposed to sleep, from the fatigue previously undergone. In cases of fetid lochial discharge, injections thrown up the vagina appeared to me to have done much service. A decoction of chamomile seems to answer very well for this purpose. Attention to the state of the bladder constitutes also an important part of the after treatment. It was very rarely found necessary to use the catheter after delivery. If within the first twelve hours water was not passed, the steam of boiling water was applied from a convenient vessel, which generally produced the effect wished for; and was also an application calculated to prevent local inflammation. But two cases came to my knowledge of injury arising to the urethra or neck of the bladder, either from the effects of tedious labour or instrumental delivery. One was a soldier's wife, who was delivered by the efforts of nature, after forty-eight hours labour; she was discharged from the hospital in the usual time, and was attacked with local inflammation, according to the most accurate account I could collect from her, in consequence, from her situation at the barrack, of being unable to pay the requisite attention to cleanliness.

It now remains to prove the assertion which was made at the commencement of this paper, that, generally speaking, labour may be considered safe to the period of thirty hours. This, I think, will be sufficiently manifested by a statement of the number of women who died that were above twenty hours ill, and who lost their lives from the different other causes that occasioned death than tedious labour, and after the use of instruments. There were only twenty-five patients that died after being twenty hours in labour, independent of the twenty-three deaths after tedious laborious labour, and the eighteen after instrumental delivery, of whom an account is before given.

The following circumstances caused these patients' deaths:

Ruptured Uterus,	5
Shoulder presentations, all of whom had been under treatment before they were sent to the hospital,	5
Puerperal convulsions,	4
Plurality of children,	3
Phthisis,	2
Lues,	1

The preceding cases may be considered as excepted in the assertion under consideration. There, therefore, only remain five to be accounted for, three of whom died of typhus fever, and were between twenty and twenty-five hours in labour. These three,

with two mentioned as having been early delivered by instruments, in consequence of the acute inflammation having set in, constitute so small a proportion to the entire number of 11,695 cases, of which account is given, as not to affect the general truth of the proposition. The total number of cases that occurred, of women between twenty and thirty hours ill in the 11,695, was 484.

Of the causes of tedious labour, I have avoided making mention, as, in the first place, conceiving them closely connected with the physical education of the female sex, the state of society, and the management of women during pregnancy;—and, in the next, involving the subject of bringing on premature birth, and the mechanical assistance sometimes necessary to be given in labour.

Cavendish Row, Dublin, December 3, 1818.

PICTURE

SOME TIGHT GUTTERS