

# Delirium in Fever

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The word delirium is derived from delire to rave, or talk incoherently. Its original derivation is from Lira, a ridge, or furrow of land, and delire is to make a crooked furrow in ploughing, i.e. to go crooked, or deviate from a straight line, or from right reason. We have no other word, that I recollect, in our language to express delirium unless it be light-headedness.

We are as often led astray by terms in physic, as in any branch ~~branch~~ of science whatever. So here we call by the same name two disorders of the intellect, w<sup>c</sup> arise from very different causes, & which require a treatment directly opposite to each other. If: there be two disorders of the same name, & these connected with two opposite conditions of the sensorum, it is obvious that to make a just discrimination between them, is a matter of the first importance in the practice of physic; for delirium is one of the most alarming symptoms in the most dangerous of diseases. Boerhaave defines Delirium to be "the production of ideas not corresponding with external causes, but corresponding with an internal disposition of the brain, attended with an erroneous judgement." It therefore arises from a certain physical condition of the brain. When the morbid condition of the brain is much increased, by the increase of Fever, the faculty of judgement is diminished, & the powers of association & imagination are morbidly increased, insomuch that the external impressions on

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the senses, when they are attended to by the mind, become also the causes of a train of delirious ideas; hence the room where the patient lies, & the persons about him are unknown, or viewed partly in their true character, & partly in their false.

Delirium . . . is a sort of waking dream, in w<sup>c</sup> the faculties of association & imagination are morbidly excited, in consequence of a peculiar condition of the brain & nervous system, connected with fever.

The circumstance of Dreams may illustrate delirium, & its various degrees may be traced from the unpleasant or frightful dreams, occasioned by a loaded stomach, or a slight feverishness, up to the most violent frenzy, accompanying inflam<sup>n</sup> of the brain.

The effects of wine & ardent spirits may also illustrate delirium; and w<sup>c</sup> may, in like manner be traced from an elevation of spirits, up to a derangement of the judgement, & perversion of fancy to a complete delirium, or temporary distraction, or craziness. In like manner, a slight delirium is produced by taking Opium, when sometimes a pleasant train of ideas are produced; but often, disagreeable ideas arise, when a thousand imaginary objects of terror & danger are brought before the mind.

If a slight febrile condition is produced, & sh<sup>d</sup> go on increasing, the whole nervous system is in a disturbed state, & the brain itself is particularly excited, & the patient appears in a delirious dream.

As the febrile excitement still farther increases, he utters

utters his dreams aloud, & his words are characterized by the incongruity of the ideas, w<sup>c</sup> they represent. When the excitement proceeds to a still higher pitch, & especially when it amounts to inflam<sup>n</sup> of the brain, the train of delirious ideas becomes still more rapid & incongruous. An impatience of restraint, combined with great restlessness marks this unhappy state, w<sup>c</sup> soon grows into a raving frenzy or phrenitis.

This is the delirium ferox of the old writers, and is owing to an increased quantity, & inordinate impetus of the blood through the organ of intellect.

The symptoms w<sup>c</sup> accompany such a violent degree of delirium, are redness of the countenance, violent pain in the head, strong pulsations of the arteries, a ferretty redness of the eyes, w<sup>c</sup> are painfully sensible to the light. On Dissection, a redness has been observed in different parts of the brain, & in its membranes, on w<sup>c</sup> coagulable lymph has been poured out, adhesions formed, & pus collected. This species of Delirium is too strongly marked, ever to be mistaken by any person who has seen it once.

Opposite to the Delirium ferox, is the Delirium nite, so called. The Greeks called this species of delirium αδρεία - οὐσαφία, or the obscure delirium. It is accompanied w<sup>t</sup> a weak pulse, a pale collapsed countenance; and a vertigo when the patient sits in an erect posture. The patient is generally silent, or seems to mutter to himself, & pays little attention to any person, or thing about him. His loss of judgement is first perceived, when he is but half awake, but a temporary recovery ensues upon the admission of light.

light, & the conversation of his friends; or after he has taken down some warm cordial draught.

This species of delirium is owing to an extraordinary languishment of the vis viree: and it is considered as the result of a circulation through the brain too languid to support its functions. The ideas flow less rapidly &c. in the other species of delirium. His state approaches more to a stupor & to active & over rapid thought. This species of delirium most commonly occurs in the Jail Fever, where there is a greater depression of the nervous power &c. in other yellow fever, or Plague: for if you rouse the patient by talking to him, & by questioning him, he will often answer your queries correctly and straitway relapses into his inattention & stupor: and if he is not soon relieved by invigorating stimulants, especially by blistering, he becomes insensible to the calls of nature, so that he feels not even thirst, altho' his tongue, mouth & fauces are dry as this paper. In this state his faeces & urine are passed without his knowledge: a subsultus of the tendons comes on; these lead to convulsions, & death closes the scene.

Altho' a delirium of this sort occurs, it is said in the first, or cold stage of Fever, yet it most commonly winds up the last, <sup>catastrophic</sup> stage of low, nervous fevers, or the jail fever. But Deliria will sometimes come on, in a manner not to be accounted for by any of the known laws of the circulation, as we sometimes observe in the last stages of Pthisis Pulmo-  
nalis, or Consumption. It seems to be owing to a metastasis, or translation of the morbid affection from the lungs

to the brain, producing a delirium, that shall last but for a few days, and then, all at once, the patient recovers his reason & talks with consistency & even energy and within 48 hours he dies. — It is this species of Delirium that occurs in fatal mortifications of the lower extremities; and in the Puerperal, or childbed fever.

From what has been said, you will naturally infer that both species of delirium are sufficiently dangerous, & alarming to call forth all your attention; and to induce you to call in the advice of older Practitioners, more especially if it be the low atonic delirium, w<sup>c</sup> is always more alarming than the fervor, or acute; but some are of opinion that the fierce is more alarming than the atonic; but both are highly alarming.

It always gives credit to a young Physician to be able to foretell even bad symptoms. You may prognosticate a delirium when there is a very severe headache, when there is great restlessness, & no disposition to sleep, & when the eyes are acutely sensible to light. A strong pulsation of the carotid arteries is another symptom. Another strong symptom is when your patient has a strong aversion to persons & things, to w<sup>c</sup> he was formerly very much attached.

It requires: no small medical knowledge to run the line between Delirium & Insanity. We shall only remark here that one is an acute disease, & the other a chronic. One calls loudly for the most prompt & bold medical treatment,

treatment, while the others should be consigned to an Hos-  
pital for the insane.

There is a peculiar species of Delirium, w<sup>c</sup> comes  
on very suddenly in a violent ardent fever, in hot  
climates. It most commonly happens to sailors at sea.  
The patient imagines that he is in pleasant green  
fields, & if he be not narrowly watched, he rises from  
his bed & walks over board. This singular delirium  
is treated of by Dr Shaw & by Dr Oliver, in the London  
Phil. Transactions. — This disorder is called Calentura.  
See Med. Dict.

As to the Mode of treatment,  
We w<sup>d</sup> observe that as the two kinds of Deliria are  
dependent on two directly opposite conditions of the  
Sensorium, it is obvious that the remedies must  
be as varied.

When it is of the highly inflammatory & violent  
species, the indication is to diminish the arterial  
action generally, & particularly to lessen the im-  
petus of the blood sent to the brain: and this  
indication is fulfilled by the local abstraction  
of the blood from the head. This is effected by  
1<sup>o</sup> Drawing blood from the jugular-vein. or  
2<sup>o</sup> By cupping-glasses. or by  
3<sup>o</sup> Application of Leeches to the Temples. or  
4<sup>o</sup> by the application of cold water, or even Ice to  
the head.

At the same time the general antiphlogistic regimen  
Should

be pursued. At the same time every source of irritation should be studiously avoided, such as strong lights, noises, & conversation of visitors; for in this state of keen excitement of the brain and nervous system, circumstances w<sup>c</sup> ordinarily have little or no influence, irritate to a pernicious degree. Above all things the bowels should be kept free & even lax, & no irritation suffered in even parts most remote from the brain; for an irritation of the neck of the bladder, or of the rectum will often disturb the brain, & thro' it the whole system.

In the other species viz the Low Delirium, a directly opposite treatment is required. You must support your patient by cordials especially by the best wine. Opium is often of singular service, especially if you administer it in the form of the Avodrine Balsam, w<sup>c</sup> contains a great portion of Camphor. Here you should avoid all powerful purgatives, & keep the bowels free by injections. Blisters are serviceable as near the part affected as possible. The Bark sh<sup>d</sup> be used freely, & in some cases ardent spirits with stimulating aromatics, & stimulating poultices of mustard, or horse radish.

I need not use many words to convince you of the great importance of making a just distinction between the two species of Deliria; but this is not always an easy

easy thing, because both species have the same symptoms viz a disorder of the memory, judgement & fancy, and unless we take in other circumstances, we may fall into error. The most puzzling thing to the young Practitioner is whether to give Opium or not. The want of sleep keeps up the fever, weakens & causes delirium; and it seems necessary to procure sleep some how or other; but then it must be promoted by means the least contradictory to the indications of cure.

It must be clear to you all that it will not do to give opium in the Delirium febre, when the vessels are acting so strongly that they are ready to burst. Every thing that gives an increased momentum to the blood, or tone to the fibres is forbidden; yet the patient seems exhausted by watchfulness; and to recruit his fatigued system, "Tired Nature's sweet restorer balmy sleep," is necessary; but by what means is the question? Among the means of procuring it, we may mention 1<sup>st</sup>. Bathing the feet, & the hands in warm water. attention to any uniform noise, such as a continued & equidistant dropping of water on some sonorous body, will sometimes lead to sleep. That class of medicines called Antispasmodics are often serviceable, especially Aether, & Hoffman's Anodyne Liquor, w<sup>c</sup> is chiefly composed of Aether, & also some of the mild preparations of Vitriol & of Nits. The Sedative Salt of Hornberg, was much celebrated on the Continent of Europe. Its basis is that peculiar salt called Borax.

In the Low Delirium, Opium, in the form of Laudanum, or the Anodyne Balsam, may be safely administered, provided it does not constrict the bowels. But altho' opium, if you give enough of it, will quiet your patient, but will not at the same time, procure refreshing sleep. But the proper administration of opium in the low delirium requires full as much judgement as commonly falls to the share of young practitioners. Consultations with old practitioners should ever be ~~disregarded~~ be considered by the young as affording advantages too great to be slighted.

Towards the end of Long Fevers, when the disorder is much diminished & the delirium vanished, and sleep is prevented by weakness, & irritability of the patient, then Opium generally procures easy, quiet, and refreshing sleep; but natural sleep is always to be preferred, & more desirable, if it can be procured.

Sleep is a temporary suspension of sensation, volition and thought; and is a resource of nature, whereby the powers of life recover themselves after satiety & fatigue.

When life is threatened by an disease, the chief symptom of which is irritation, any means by which sensation, whether natural or morbid, & muscular motion, whether voluntarily or involuntarily, convulsive, or spasmodic, can be soothed, or suspended, will prove salutary, by allowing the powers of life to rally, as it were, to recover themselves: Hence the use of opium in all disease of inordinate irritation, where there is no raging fever.

In the latter end of those Fevers denominated Putrid, opium given with Lemon juice, or strong vinegar, as gr<sup>1</sup>, or if opium

to a spoonful of the Vegetable acid, has often such bene-  
ficial effects towards the end of Fevers as to surpass  
any form of an opiate now in use.)

### Cold Water, as a Diaphoretic in Fevers

(Diaphoretics are those medicines w<sup>c</sup> promote a discharge by the skin.

All diaphoretic medicines operate either by exciting the force of the circulation; or else by exciting the extreme vessels only on the surface of the body. These two operations however, take place sometimes separately, & sometimes together.

The Urine & the perspiration are counterbalances to each other; for whatever increases the disposition to the one diminishes that of the other. But the state of the skin is particularly connected with that of the stomach.

"It is now pretty well understood, though not clearly accounted for, that in the hot stage of continued Fevers, as in the Typhus, & Scarlatina, there is a peculiar constriction of the vessels of the skin, marked by extreme dryness of its surface, & accompanied by great heat, w<sup>c</sup> is increased by increasing that heat, by means of a weight of bed cloths, & the exclusion of cool air."

In this condition of the body, cold affords the only ready means of removing the febrile constriction of the cutaneous vessels; & cold judiciously applied, is the best diaphoretic under such circumstances.— Refer you to Dr Currie's book on the effects of cold water. I would

would :: remark the practice of affusions of cold water  
is not a new discovery; it is the revival of a very old  
practice. The ancients had recourse to cold water in  
the cure of Fevers. Celsus commends the practice  
of giving copious draughts of cold water in ar-  
dent fevers; & describes the consequences to be  
precisely such as are produced by the cold af-  
fusion externally. After its exhibition, he says, the  
patient falls into a sound sleep; the heat remits, &  
a free perspiration breaks out. His words are "plenus  
" somnus venit, per quam ingens sudor effunditur,  
" idque prestantissimum auxilium," (De Med. L. iij. cap. 7.

Galen, as well as physicians in the XVI century  
made use of cold water in order to excite sweat, as  
we learn in Lommius de Febris.

At a century ago, there was published in England  
a book entitled "Hebrifugum Magnum", or  
"Common water the best cure for Fevers."  
The author asserts that from a pint to a quart of  
cold water, swallowed before bed time, in the 1.<sup>o</sup> or 2.<sup>o</sup>  
day of a fever, produces a copious sweat & cuts  
the fever short; & he relates many instances of these  
effects took place: But the author (a Mr Hanecke)  
who was not a physician, was severely attacked by  
the faculty, & even abused for his ignorance &  
presumption. Nevertheless the practice of the an-  
tients, as well as the moderns testify to its truth.

There can be no doubt that cold water re-  
ceived into the stomach in the hot stage of fevers,  
produces

produces its diaphoretic effects in consequence of the sympathy w<sup>c</sup> exists between that organ & the skin; and in the same way the vegetable acids, & some neutral salts operate on the cutaneous vessels.

There is another class of Diaphoretics, or rather sudorifics w<sup>c</sup> excite sweat by accelerating the general circulation, such as Gracium, Snakeroot, Contrayerva. These ought only to be employed in those diseases where debility prevails. In all febrile diseases connected w<sup>t</sup> local inflam<sup>n</sup>. as in Peripneumonia, Phrenzy, or inflam<sup>n</sup>. of the bowels all stimulating Diaphoretics must be carefully avoided; since their mischievous influence, in accelerating the circulation, w<sup>p</sup> more than counterbalance any advantage w<sup>c</sup> might be received by relaxing the vessels of the skin [See w<sup>t</sup> is said of opium &c in the last P but two, Art Diaphoretic]

Some not thoroughly acquainted w<sup>t</sup> the Medical Science may, on hearing so many diff<sup>t</sup> things recommended for the cure of fever, <sup>think</sup> that our art was built on no fixed principles, but that all was vague & uncertain. To such I would remark that the febrile state is always dangerous, & that we arrest & divert this dangerous state by a counter irritation; or by making a strong impression of another kind. Hence the efficacy of mercury & opium; hence the efficacy of affusions of cold water; & hence the efficacy of Blisters.

Many diseases beside fevers are cured by making a stronger irritation or impression w<sup>c</sup> overcoming the first one carries off the disease. Thus e.g. when we give mercury in the venereal disease, we raise one artificial disorder to cure another.