PUERPERAL AND GESTATIONAL PARALYSES.[1]

BY

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VARIOUS forms of paralyses may appear during gestatio complicate any part of the puerperal period. Writers usually described these nervous affections as puerperal. obvious, however, that, both for convenience and accuracy, should be considered apart. Hence in the following discu all paralyses occurring in the gestational period will be c gestational paralyses, and all appearing during labor or the l in period puerperal paralyses. Hysterical paralysis may occ any form, and at any time during gestation or the puerper but will not be considered in this connection.

GESTATIONAL PARALYSIS may be due either to a central peripheral lesion.

Central Paralyses (Gestational).—Hemiplegia from ce lesion is rather common in pregnancy; it may be the result cerebral hemorrhage, or less commonly from embolism; it is said to rarely occur from cerebral anemia. In grave renal le complicating pregnancy, uremia has been known to pro cerebral paralysis without discernible lesion. Cerebral n plegias have been reported, but are rare indeed.

Paraplegia of spinal origin may also complicate gesta literature shows, however, that its occurrence is extremel frequent.

Peripheral Paralyses (Gestational).—Peripheral paralyse curring during pregnancy are neural in origin and are e *toxic* or *traumatic.*

The *toxic* varieties of gestational neuritis usually appe women who have come to confinement weakened and cach

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ome unusual drain upon nutrition, most frequently from ged and intractable vomiting.

following report is typical of this form of neuritis; the is exhibited to the Cuyahoga County Medical Society but time since:

F. K., aged 27, a widow with three healthy children, the of which is 6 years and the youngest about 10 months. s not been very strong since her marriage. She has never y children nor has she had any miscarriages. Her hus- ied on September 16, 1901, of acute tuberculosis. Care- mination reveals neither pulmonary nor cardiac disease in ient.

ng all of her pregnancies she has been very sick at the h and vomited continually from the second month until ouchement. During the latter months of her last preg- she suffered from considerable swelling and much pain in s, and states that they felt numb, powerless, and heavy; ns, however, were strong. This weakness, powerlessness, mb feeling in her legs became more marked just previous delivery. Immediately after the birth of the child her came very painful and tender to touch. After the usual bed she attempted to get up, but found that, although the g had disappeared, the legs were weak and numb. This ss and numbness was particularly marked in the right he now states that when she attempts to go up-stairs her l heavy, and if she does not watch where she is going her ch in the carpet. Her legs are so weak and her ataxia so hat she cannot go up-stairs unless there is a baluster for t, nor can she walk in the dark. She is not constipated sphincters are intact. She has no headache or backache, y affection except her inability to walk and the numbness feet and legs.

nination.—She is intelligent, of medium height, and thin ciation. The heart, lungs, abdominal and pelvic organs normal. There are no ocular affections nor any weak- paralysis of any muscle or group of muscles in the face or extremities. Tendon reflexes in the upper extremities are ndistinct. The tongue is protruded straight; the labio- old is deepest on the right. The left pupil is larger than ht, both react promptly to light and accommodation; the

palpebral apertures are equal; the discs and fields are nc
but a fine lateral nystagmus is present.

She walks with a distinctly ataxic gait, and marked foot
is present on the right side. She cannot stand with her
closed; in fact, she stands poorly with them open. Both
jerks are absent; front tap and Achilles jerk are also al
plantar reflexes are absent; gluteal and abdominal reflex
present. A well-defined anesthesia of the sole of the righ
and toes is demonstrable. There appears to be a distinct at
of the intrinsic muscles of the feet, which is most noticeal
the right foot, and there is evidently some atrophy of th
terior tibial and peroneal groups, most marked, however, c
right side.

Her sense of localization is not good. She thinks I am t
ing the great toe when, in fact, I am extending the foot str
On the anterior aspect of the left tibia is considerable peri
thickening which looks very much like a specific periostit
though all other evidences and history of specific disease a
tirely wanting.

Vinay[1] has reported a very similar case which is well w
of brief abstract: During the first months of pregnanc
patient lost a great deal of blood and during the latter m
suffered from hyperemesis, so that she came to confinemen
cachectic state. During the last two months of pregnanc
complained of paresthesiæ of the extremities and of pain
weakness in the legs. On the third day after delivery she
chill with fever which lasted only forty-eight hours; on the f
day she noticed that there was marked loss of power in a
extremities. This rapidly increased until she was almost
pletely paralyzed. About six weeks after confinement she l
to improve and four months from that time had fully reco

In some of these forms of neuritis it has been assumed
with good reason, that circulating in the mother's blood is
unknown toxic agent which has a selective affinity for the n

That something besides a cachexia or nutritional failure
which conduces to the production of gestational neuritis th
cases reported by Elder appear conclusive. Both women
normal, neither being cachectic, anemic, nor exhausted. In
symptoms appeared at about the sixth month, and consist
tingling and paresthesia, chiefly in the hands, but in one c
cases it was also in the feet. Sensation in both cases was

some extent, but there was little or no muscular paralysis. er known causes of neuritis could be excluded. After de- recovery immediately began and proceeded rapidly, one ing in four or five weeks, and the other in about four . Elder[2] takes the absence of hyperemesis, weakness, chexia, which are usually characteristics in most cases of onal neuritis, as evidence that they are not necessarily itants, but expresses the opinion, which I believe to be unded, that some toxin is elaborated within the body of the or child which has a selective toxic effect upon the nerve of the pregnant woman. Windscheit[3] states that the y of these rare cases is unknown, but they are supposed to to the action of some poison circulating in the blood. The l picture is usually that of a pure form of motor neuritis. cial nerve seems to be selected. Usually there is a gradual oment of the motor weakness of the extremities, pain is in- ntly complained of, but slight sensory changes may be t. The muscles usually atrophy and show the reaction of ration. Other trophic changes have been observed to oc-

wjeff[4] and Polk[5] have reported fatal cases of peripheral s occurring in pregnancy, and, since most of these cases recover when the uterus is emptied, one should be pre- to induce labor if there be indications of progressive and neural inflammation. Eulenberg induced labor in his evere case in order to save life.

following personal observation possesses features varying ch from the preceding cases, but strong with suggestions use similar to that which Elder assumes in his case, that a bstract will be of value:

F., aged 36, family history good; has one daughter 7 years. She became pregnant in the early part of 1892. orried very much about her condition and became quite cholic over the fact that she should have another child she had a daughter nearly grown up, and that it would also t her from attending the World's Fair at Chicago. She the Fair while she was in her seventh month, and while noticed a beginning weakness and numbness of the legs. rew worse, until she was able to be on her feet only a part day. She returned home and was confined nearly three before her expected time. Her labor and puerperium were

normal. The weakness increased in her lower extremities was accompanied by some slight loss of sensation, conside aching pains, and a very marked amount of ataxia. All o symptoms were distinctly those of a neuritis. Dr. J. H. Lo concurred in the diagnosis of a gestational neuritis. Sh made a partial recovery, but still suffers some weakness ataxia.

Since this form of neural inflammation usually terminat birth, is it not possible that we have some toxemia as a res the metabolic changes incident to the relations existing be mother and unborn child? Is it not possible that the ne is a direct result of poisoning from the blood laden with matter from the failure of the established ratio between duction and elimination of the poisonous emanations of th individual organisms?

Study of the literature of gestational and puerperal ne shows that many of the reported cases begin during gest and become complete only after labor—truly gestational entitled to be considered as transitional forms.

Traumatic Neuritis (Gestational).—Traumatic gestat neuritis has been assumed to exist by some authorities, an amination of the literature seems to afford grounds for claims. In placing it in this classification I wish to state th lief that some of these cases are ischemic paralyses due t pressure of the fetal parts upon the vessels of the mother, pressure neuritis caused by an edema of the nerve sheaths duced by disturbance of the pelvic circulation.

It is a well-recognized fact that a mixed nerve may porarily lose its power to conduct motor impulses from h its nutrition disturbed by any cause which either deprives blood or unduly congests its delicate elements. The sam fect may supervene from the elastic and slowly developed sure of exudations into contiguous tissues or even into the sheath, or from simple elongation of the nerve by stretching. however, the pressure remains too long or becomes too gre the anemia or congestion continues too long, inflammation an generation of the nervous tissues will occur, with final in ment of the sensory power of the nerves, and paralysis of permanent character supervene.

Since the days of Albrecht von Haller[6] it has been known the interruption of the blood supply of the lower extre

ause them to become paralyzed and stiff. Later the great
nn[7] called the attention of the surgeons of the world to
that rigidity and stiffness with contracture of the muscles
requently followed too tight bandaging, and conclusively
trated that it was not pressure upon the nerve trunks, but
ct result of interference with the blood supply, that pro-
what is now called ischemic paralysis.

the belief of the writer that some of the transient paraly-
ch have been noted to complicate gestation and to follow
nd have been formerly ascribed to reflex, dynamic, and
anciful causes, were due to an ischemic paralysis which
oduced by interference with the circulation from too long
nt of the head in the inferior strait, the pelvis being either
ll or misshapen, or containing a head whose proportions
o great, particularly in certain diameters; or perhaps the
uterus exerted too much pressure upon the large arterial
above the brim of the pelvis or upon arteries pursuing an
l and anomalous course.

view will probably explain some of the accounts of tran-
araplegias which followed labor and recovered in two or
ays. The disturbed circulation of the lower limbs inci-
pregnancy is more likely the cause of the muscular cramps
precede and accompany labor than pressure upon the
since it is a well-recognized fact that the portion of the
lexus which goes to the formation of the external popliteal
neal nerve is more likely to be affected than the nerve sup-
the calf muscles, which are well known to be most fre-
the seat of cramps both before and during labor.

the opinion of the writer that some of the reported cases
ted paralysis of the nerves of the upper extremities im-
ly following labor may have been due to stretching the
y ill-directed muscular effort during the agonies of travail,
ty position of the member while under anesthesia.

all a case of pain, loss of power, and formication occurring
distribution of the ulnar nerve, which immediately fol-
severe but normal labor in a very excitable and muscular
. This nerve lesion was thought to be due to pulling on
right rods in the bed above her shoulders, thus exercising
rable tension upon the branches of the brachial plexus.

PERAL PARALYSES.—All those paralyses occurring during
r in the lying-in will be classed under this general head.

As in the paralyses of gestation, the paralyses of the p perium may be divided into central and peripheral.

Central Paralyses (Puerperal).—Hemiplegia complicati following labor is not particularly uncommon and the prog is usually good. I recall a patient who was confined by Dr. Lee, of Cleveland, who some hours after labor developed a s paralysis of the right side, with considerable loss of speech, however, made a perfect recovery in less than eighteen mo The lesion was undoubtedly embolic, probably originating the dislodgment of a small bit of fibrin or a fragment of a of blood from one of the uterine sinuses. While embolism i most usual cause of cerebral palsies in the puerperal perio the occurrence of hemorrhage as the result of the hydrem pregnancy has been recorded.

Cerebral monoplegias from like causes may occur, bu amination of the literature shows them to be so excessively i quent as to suggest a coincidence rather than a complicatio

It is also stated that a transient puerperal paraplegia d exhaustion of the centres of the cord may occur. I have n met with such a case, from which all the organic and hyst elements could be confidently excluded, that was not dir ascribable to a disturbance of the circulation of the lowe tremities.

Mills[8] reports a case of paralysis of both legs which foll soon after labor and which was due to a transverse myelitis the septic conditions which complicate the puerperium the o rence of a septic myelitis is not only possible but has bee served. Handford[9] has reported a case which is evidently a fuse myelitis resulting from puerperal sepsis.

Peripheral Paralyses (Puerperal).—The peripheral para which occur during labor and the lying-in period are neur origin and for convenience of discussion may be divided two classes which will to some extent indicate their ca *traumatic* and *non-traumatic.* Traumatic is used in relati the nerve tissue alone, and not in reference to the trauma of other tissues during labor, which open them to a sept flammation and thus by a traumatism produce septic neuri

Non-traumatic neuritis (puerperal). The non-traumatic f of puerperal neuritis are either (1) *septic* or (2) *non-septic*

(a) Any nerve of the body may be inflamed during a s puerperium. Instances of neuritis of the median, ulnar,

nerves have been recorded as occurring as a result of puer-
sepsis.

Cases of extensive polyneuritis have been observed to
icate or follow a septic lying-in period.

h of these forms undoubtedly depend upon a true degen-
n of the nervous tissue itself or septic inflammation of
erineurium. Quite a large percentage of the cases are
legic in distribution. They are undoubtedly examples of
dinary septicemic neuritis, and literature contains not a
assical examples. The following case, quoted from Rey-
[10] affords an apt example:

*ronic Pyemia Following Labor; Atrophic Paralysis of
Legs; Gradual Recovery.*—Mrs. H. was quite well until her
hild was born, in 1892, when she was 18 years of age. The
ement took place in a Manchester hospital and she told me
hortly afterward she was very ill and was operated on for
r abscess.' She was then removed to the Manchester Royal
ary, and I am informed by one of the late resident surgi-
ficers that she was found to be suffering from chronic
a and paralysis of the legs. She was removed to the work-
and came under my care early in 1893 in the Manchester
ouse Infirmary. She was then suffering from total atro-
paralysis of both lower extremities, with contractures of
ees; there was absence of knee jerks, but the arms and sen-
were unaffected. She was treated by massage and was
rged much improved in eighteen months. At the present
June, 1897) she is practically well and can do all her ordi-
housework. She walks a little lamely because of the rigid
icture of all the joints of the toes into the soles of the feet,
ll other muscles of the lower extremities are normal and
ourished. There was no previous history of alcoholism."

re occasionally occur examples of puerperal neuritis in
n who have suffered no traumatism at labor nor have had
eptic symptoms. That they should be regarded as non-
atic and non-septic is proved by the occurrence of similar
previous to labor. These cases were first described by
us[11] and later by other observers, especially Eulenberg.[12]
istinguished two forms:

A localized form, in which only one or two nerves are
ed—in the *arm type*, the median and ulnar; in the *leg type*,
ural. Other isolated nerves have been found affected, even

the optic nerve. Pain, sensory or circulatory disturbances exceptional, but atrophy of the muscles and reaction of de eration commonly takes place. While many of these case cover, there are not a few of them which remain permane crippled.

(2) *A generalized form,* in which there is widespread ne inflammation which may take the ascending type and cl resemble Landry's paralysis. The cranial nerves have beer served to be affected in these cases, and death result fron volvement of the respiratory nerves.

While some of these cases, as has been stated, present isol neuritis, others widespread neural degeneration, yet they r develop the severe and rapid forms which are met with as sult of sepsis or other infections provocative of high fever constitutional disturbance commonly noted in the so-called ritis of infections.

Every grade of this form of neuritis may be met with, a transient tingling, numbness, and weakness in the distribu of a single nerve to widespread paralysis with consequent phy, contractures, and permanent disability.

A recurrent type of neuritis has been noted to appear each labor. The following case, reported by Rhein,[18] is of type:

The patient was a healthy woman who, after a normal labor, began to suffer pain and numbness over the flexor face of the left forearm. Weakness of the flexor muscles manifested itself. This condition remained with little ch until after her second uncomplicated labor, when the symp and disability became more intense. Finally, after a third mal labor, the other arm became the seat of a like trouble the left arm grew still worse. Examination revealed inab to raise the hand to the head; flexion of the fingers weak; s loss of sensation over the flexor surface of the forearms; atr of the intrinsic hand muscles; nerve trunks not tender to sure.

Traumatic neuritis (puerperal). The most frequent and important varieties of puerperal neuritis are those which traumatic in origin and either the direct result from inj received by the nerve itself or from pressure exerted by ex tions into contiguous tissues, thereby producing a tempo interference with its normal conductivity from a disturban

lecular continuity rather than an actual disintegration of nents.

a clearer conception of this subject these traumatic varie- neuritis are best considered under two separate heads: ıose which are strictly contusional in origin, and (2) those pressure from exudations, which exudations may be septic -septic in origin.

following case will serve to introduce us to a study of a)f neuritis which I believe to be of contusional origin and y ascribable to the wounding of a part of the sacral plexus forceps or parts of the child during labor. The case was ed to me by Dr. Geib, of Cleveland:

. L. C. W., aged 28, after a normal pregnancy came to con- nt November 9, 1900. After fifteen hours of labor, was de- l with forceps by Dr. W., without the aid of anesthetics, a laceration resulting. *Immediately after the application of strument she felt a sensation of weakness and paralysis in ght leg and thigh.* Following her delivery the leg remained less, became cold and numb, with considerable loss of sen- below the knee. She suffered but little pain, except in the nd back. The control of the urinary sphincters was lost time and is still weakened. The anal sphincters were not ed. She had no chills nor did any fever develop during ring-in period. Although the left leg felt cold, numb, and less, it has never been very sore nor tender to touch, and as suffered but little pain except when she attempted to She was on crutches for over three months. Dr. Geib saw the case about eight weeks after the confinement, and, nizing its peculiar features, very kindly referred it to me tamination.

amination.—The patient is under-sized and the pelvic di- ers are all under normal. She walks with a slight limp. right leg is found to be cold, but little discolored. The pa- states that the toenails on the right foot do not grow as ly as on the left. The shin line is very plainly seen on the leg, revealing the fact that the anterior tibial and peroneal)s are considerably atrophied. The extensor hallucis, ex- r pollicis, extensor brevis, and minimi digiti are intact.

e calf muscles are strong and not wasted. The knee jerks th sides are equal and active; Achilles jerk is marked on the but faint on right; no ankle clonus on either side; front tap-

present on the left, absent on the right. Three and on inches below the patella the right leg measures 10¼ inche left 10¾ inches; five inches below the patella the righ measures 10 inches, the left 10½ inches; seven inches belo patella the right leg measures 8½ inches, the left 8 i Measurement of the forearms shows that the left is on inch smaller than the right. The patient being right-ha these measurements show the loss of nearly an inch in ci ference of the right leg. The peroneus longus contracts slightly to a powerful faradic current, but no contraction tibialis anticus can be secured. To the galvanic current peronei and tibialis anticus show the reaction of degener which is particularly marked in the latter. There is sligh of sensation on the dorsum of the foot, which continues u outside and anterior aspect of the right leg and correspon the cutaneous distribution of the external popliteal nerve.

This case is so typical of a form of paralysis which occ the distribution of the peroneal nerve following labor, a traumatic origin, that I will give a brief recapitulation o similar cases which I have previously reported:[14]

CASE II. *Prolonged Severe Labor Terminated by For Right Peroneal Paralysis, Anesthesia, Paresthesia, and Neu Recovery from Neuritis and Sensory Disturbances, but Pe ence of Paralysis and Atrophy.*—Mrs. L., aged 26; long s labor; forceps and chloroform. The morning after deliver much pain in the right leg and hip, with inability to lift member. All of her symptoms increased in severity, a panied by all the distressing symptoms of a severe neuritis. pain was manifested entirely in the distribution of the ext popliteal nerve. Some anesthesia was present on the dors the foot and toes. Eighteen months later the patient wa amined and there was found considerable loss of volume i right anterior tibial and peroneal groups.

CASE III. *Prolonged Labor; Instrumental Delivery; S Left Peroneal Neuritis with Paralysis and Atrophy; Limited of Tactile Sensation; Slow Recovery, with Weakness an rophy of the Anterior Tibial Persisting.*—Mrs. E., primi aged 30; small woman with contracted pelvis. Labor s fourteen hours in duration; terminated with forceps and c form. In the evening her accoucheur was sent for on accou severe pain in the left hip and leg, also numbness and tin

outer and anterior aspect of the right leg. There was also power. The following week the sensory paralysis re- about the same, but the motor symptoms increased until was practically useless. She suffered no chills nor rise perature, nor could a pelvic exudate be demonstrated. -two days following her labor I examined the patient and no evidence of pelvic mischief, except the exquisite tender- the pelvic nerves. Quantitative and qualitative changes galvanic current were present in all the muscles supplied peroneal nerve. Examination disclosed inability to dor- x the foot or extend the toes. She could depress the outer of the foot, but could not draw it up. There was loss of sense on the dorsum of the foot and lower part of the nd posterior aspect of the calf. Atrophy supervened, but ally made a good recovery. This patient has had two n since this case was reported, both of them being much children, and in each instance she has suffered a repeti- this attack, but much less severe than the first.

following case of extensive paralysis from injury to the plexus during an ill-conducted forceps delivery was seen r. R. E. Skeel, September 5, 1899:

P., aged 30, an under-sized woman with small conjugate r. Has been married nine years and has had two chil- One boy, now aged 6 years, was born after a severe labor id of forceps—a very small child, weighing but three . She states that she suffered a phlegmasia alba dolens her lying-in period. Her second pregnancy was normal e came to confinement February 25, 1899. She was in irty-six hours, during which her pains were strong. Her an then applied forceps, which she and her husband state ot on for a period of three hours without result; no anes- was administered. The forceps was then removed and n interval of three hours was reapplied, and after another ours of active traction, during which but little chloroform ven, she was delivered of a dead child whose head was ed by the forceps and the under jaw broken. Evidence t show that the child was large. Immediately after her y it was found that the sphincters of the bladder were ed, and she also experienced difficulty in securing a move- f the bowels. Her greatest suffering, however, was from out the hips and pelvis extending down to the posterior

portion of the legs; there was also a burning pain and l sensation on the outside and anterior aspect of each leg an sum of the foot. The limbs were swollen, cold, and useless. thing would control the pain and she became a morphine *ha* About three months later she came under the care of Dr. to whose courtesy I am indebted for the privilege of exan the case.

I found her lying in bed with marked contractures an siderable atrophy of the hamstring muscles, which was marked on the right side; complete paralysis and wasti the anterior tibial and peroneal groups on either side sphincter control had been regained. There was some num and tingling in the legs and feet. A complete foot dro present on each side. Pelvic examination revealed great t ness in the region of the sacral plexus, and a separation symphysis pubis sufficient to allow the finger to drop betwe ununited ends. Involution had taken place; no eviden pelvic exudate could be detected. This case was extreme teresting from a number of standpoints, but the greatest in to me was the paralysis, atrophy, and loss of sensation, marked in the distribution of the external popliteal nerves.

That the paralysis in these cases is due to an actual con of some part of the sacral plexus during labor seems to require no further demonstration. When we take into con ation the very sudden onset of the paralysis with all the acteristics of a neuritis, the distribution and course of th ability, it is impossible to conceive of any other hypothesi is adequate to explain its development. Indeed, the not quent occurrence of this particular type of paralysis foll labor presupposes a common origin and one intimately rela the physiological process of parturition. Being a sequel difficult labor causes us to immediately suspect mechanic jury to some of the component or contributing parts of the plexus within the pelvis, and a resulting descending ne of those nerve fibres which ultimately emerge from the sciatic to form the external popliteal or peroneal nerve. In to appreciate the mechanism of the injury it is necessary to briefly to the anatomy of the parts.

You will recall that part of the fibres from the fourth a of the fibres of the fifth lumbar segments unite to form the l sacral cord, which passes downward winding over the sharp

linea innominata into the pelvis, where it contributes to nation of the sacral plexus. Since from the apex of the plexus arises the great sciatic, from which the peroneal or l popliteal nerve is given off, and since the sacral plexus ed by the junction of the first, second, third, and part of rth sacral nerves with the lumbo-sacral cord, it follows y injury to the lumbo-sacral cord will result in damage to the branches of the great sciatic.

ly the lumbo-sacral cord fails to join the plexus, but con- is a separate trunk down alongside the great sciatic to be- e peroneal nerve without any plexal connection. Mills,[16] re,[16] and others have shown that the fibres which mainly e this lumbo-sacral nerve preserve their identity and are off as the external popliteal or peroneal nerve. From icts Hünermann[17] was led to believe that this form of leg is was caused from injury to the lumbo-sacral cord, and l that the contributing causes were *(a)* an abnormal posi- the nerve, *(b)* a lack of proportion between the head and vis, *(c)* a faulty position, *(d)* or careless instrumentation. een,[18] after a study of two hundred dissections, found that mmon formation of the external popliteal nerve is from rth and fifth lumbar and the first and second sacral nerves er cent). The common formation of the internal pop- erve is from the fourth and fifth lumbar and the first three nerves (64.5 per cent)."

iew of the fact that these cases present a paralysis so delimited to the distribution of the external popliteal t injury to the internal popliteal renders their explan- ot as simple as it appears, and, as Thompson suggests, nann certainly fails to explain its occurrence as com- as science demands.

npson[19] quotes Bardeen, who has suggested a possible ex- on which the former puts into the following words: pper roots of the sacral plexus do not lie upon the pyri- uscle, but against the bony wall of the pelvis, and are thus l to injury from pressure during certain difficult labors. e dorsal offsets of these roots which lie against the bone ich receive the chief injury. The external popliteal nerve e up from these dorsal offsets, and therefore the paralysis fly localized in the distribution of this nerve." I think

that this is on the whole the most scientific explanation action of traumatic force in producing this form of neuri

We have yet to consider those cases which occur from a developing pressure from exudation, which certainly n looked upon as traumatic in origin. These cases posse siderable interest and may result from septic or no exudates. As an instance of a pressure paralysis from exudate, the following case was recorded by Hervieux than twenty-five years ago, and is a thoroughly scientific bution, and, considering the time of its report, stamps porter as a man of great scientific attainments and po observation:

A healthy woman of 19 years experienced a natural d On the sixth day pelvic pains, fetid lochia, and fever ann the onset of puerperal infection. The septic conditi marked two days later by a dry tongue, rapid pulse, in pains in the abdomen, and a typhoidal aspect of the fa the thirteenth day there appeared loss of power in the le this time she had great fever, pulse 128, rapid respirati tended abdomen, abundant lochia, and an erythematou Later pain developed in the left iliac fossa and meteorism and temperature remained high, patient exhibited a dry loss of power and profuse perspirations. On the sixteenth was noted that she was unable to lift the lower limbs; th no anesthesia nor involvement of the upper limbs. Ten and phlegmonous indurations could be demonstrated left iliac fossa; they seemed to be in relation with the ad the left of the uterus. Under blistering and Neapolita ment she improved, and as her general condition mended began to return in the legs; the pelvic indurations were gr absorbed, but the patient continued to complain of vagu in her thighs. At the end of two months the pelvic indu had disappeared, she had regained the use of her limbs, a discharged from the hospital in a good way to recovery.

This is an apt illustration of septic infection produci tritis and pelvic cellulitis marked by large exudates wh dently involved the nerve trunks, producing a paralysis e by pressure. That we may thus confidently assert its o further shown by the fact that the motor nerves were prin involved, the only sensory symptoms being the neuralgic

ıoreover, the recovery occupied a space of time too short ıit of a complete regeneration of the nerve tissues.

alysis following the peroneal distribution occasionally de- several days after labor, sometimes occupying a week be- t is fully evolved, oftentimes presenting no evidence of and examination reveals little or no sign of pelvic exuda- Mills,[21] Dercum,[22] Sinkler,[23] and others have reported ases. The following is an abridged report of the first of a of cases reported by me in 1899.[24]

longed Labor; Right Peroneal Paralysis and Neuritis with sion to the Other Side; Slow Recovery from Neuritis, but tence of Some Atrophy and Paralysis.—Mrs. T., large, ro- voman; second marriage; by first husband had one small whose delivery was easy and normal. Second husband is e man, and by him this was her first pregnancy, which had ıneventful. Her labor lasted ten hours, during which she ı almost continuous pain, but terminated naturally, the child ing nearly twelve pounds. Three days after confinement : pains began in the right groin and hip, extending down foot and toes, which were found to be slightly swollen and ive to touch; loss of power was apparent. No intrapelvic ıtion or inflammation could be detected; lochia were normal; ·rature raised 1.5° F.; no chills. During this time she was · the care of Dr. Walker, of Carleton, Ohio, who states that ad much pain in the groin and leg. No anesthesiæ were ıt, but a distressing burning sensation was felt on the out- f the right calf, the dorsum of the foot and toes. About ays later she had a similar but much less severe pain in the region of the left leg and foot. There was no loss of sen- on either side; legs were sensitive to handling, considerable f power in both, but most marked on the right. In eight she walked without assistance, and in two and one-half ıs the sensory disturbance had disappeared. Three months ıtrophy was present in the anterior tibial and peronei of the leg.

ıckel[25] states that even such slight pelvic exudations as pany phlebitis may compress the nerves, and, still more tant, small extravasations into the nerve sheaths may occur. rmann[26] refers to a case of severe sacral neuralgia where topsy disclosed numerous thrombotic veins in the pelvis, one

of which lay alongside of the sciatic, to which it was bound l
flammatory deposits.

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