ceased; and it has since increased in years, a totally different being.

I examined, within the last week, the body of a newly born infant, in whom a strongly marked double lateral curvature existed *in utero*. The preparation is preserved in the Museum of the Royal Orthopædic Hospital.

Thus, then, lateral curvature may commence *in utero*. When once established, it seems to go on, if unchecked, at uncertain intervals, and at different rates of progress. It still continues a progressive disease, even at 80 years of age; and is attended by a variety of distressing symptoms, referrible to the displacement of the different viscera of the thorax and abdomen.

A medical friend once asked me, in a tone of scepticism, if I thought that the thoracic or other viscera really underwent such change of position as to give rise to the symptoms usually associated with lateral curvature. I referred him to Bouvier's plates, where he saw represented the displacement of the heart; the lung on the side of the convexity spread out into thin concave layers; the lung on the concavity dropped into an irregular hollow space. He saw sufficient to remove his incredulity. I may further quote the following passage from Bock, in whose work the visceral displacements of deformed persons are tersely and graphically described:—

"Deformities of the trunk, especially of the thorax, exert no inconsiderable, but often a very injurious influence, on the functions of internal parts. The following are the chief abnormities found in persons suffering from curvature of the spine.

"(*a*) *Vascular System.* Distortions and twistings of the arteries (sometimes with deposits), especially of the aorta, the carotid, and the subclavian. The veins are dilated and gorged with blood, either from pressure or impeded pulmonary circulation. The heart is displaced in various ways, and is dilated and hypertrophied in its right half; in the left one, not unfrequently, defective mitral and aortic valves. The conditions resulting from these changes are, congestion of blood in the venous capillaries, dropsical effusions, shortness of breath and palpitations of the heart (especially upon going up stairs), cyanosis, chilliness, and numbness of the extremities.

"(*b*) *Respiratory Organs.* The trachea is not unfrequently displaced, bent, twisted, squeezed between the vertebral column and sternum; sometimes compressed by a goitre (hence the audible sibilous respiration, and the attacks of suffocative dyspnœa, especially when catarrh is present). The bronchi may be compressed or displaced. The lungs are squeezed together between diaphragm, heart, and vertebral column; hence their tissue is condensed, or gorged with blood, or emphysematous. Catarrh, mental excitement, and bodily exertion, induce in those suffering from lateral curvature, an amount of dyspnœa aggravated to the point of suffocation.

"(*c*) *Organs of Digestion.* Œsophagus often bent or compressed, producing difficulty of deglutition; the stomach and intestines variously twisted and distorted, often narrowed or distended by gases. The liver is displaced, hyperæmic, or atrophied. Persons with curvature are often visited with so called abdominal derangements.

"(*d*) *Urinary and Sexual Organs.* The kidneys are often found displaced, with impeded excretion of the urine. The bladder and uterus are displaced and compressed. Dyscrasia, disordered menstruation, sterility, hysteria, find therein their cause.

"(*e*) In consequence of the impeded return of blood from the head, the usual signs of congestion show themselves (vertigo, buzzing in the ear, bleeding from the nose, apoplexy). When the spinal curvature is considerable, the spinal cord may be more or less paralysed." (*Pathologische Anatomie*, pp. 77-8.)

In lateral curvature, the result of debility, the spine usually makes one primary curve extending from the upper dorsal to the middle or even inferior lumbar region; but, as the deformity increases, the necessity of a compensating curve arises, in order that the upright position of the body be maintained. Hence a curve, with the convexity directed towards the left, forms at some variable situation in the lower dorsal or upper lumbar region.

To the question, then, often put, Which curve is the first in a case of double lateral curvature, the upper or the lower? the reply would be, the upper; inasmuch as it represents the remains of the primary sweep, extending the whole length of the vertebral column. For this explanation I am indebted to Mr. Tamplin.

But it must never be forgotten that, even when lateral curvature commences *in utero*, all the parts about the vertebral column are perfect; every muscle, ligament, and bone, is as well developed as in the case of "congenital club-foot". Of these points I had a striking example in a case of congenital skoliosis (lateral curvature) from pressure *in utero*, the particulars of which shall be given in another communication.

[*To be continued.*]

ON THE MORTALITY OF INFANTS IN FOUNDLING INSTITUTIONS, AND GENERALLY, AS INFLUENCED BY THE ABSENCE OF BREAST-MILK.

By C. H. F. Routh, M.D., Physician to the Samaritan Free Hospital for Women and Children; late Physician to the St. Pancras Royal Dispensary; etc.

Part II.

[*Concluded from page* 123.]

7. *Where a wet nurse to tend a child exclusively cannot be met with, and it is conceived that the circumstances of a child's case still need that human milk should be given, we must act otherwise.* There are, fortunately, some women who have both milk which is good in quality and excessive in quantity. This fortunate peculiarity is usually found in very young women. As before stated, it contains a larger quantity of solid matters; and hence, conjoined with a poorer milk or artificial food, it may so far suit the child. I know it is a common opinion that no one woman can nourish at the same time two children. I believe this is not always correct. Certainly, in the vast majority of cases, where children are artificially assisted by other milk as supplementary, she will be able to do so. I know it is, again, a popular prejudice, that two milks must not be mixed, as they will be sure to disagree. This is, I believe, the opinion also of many well informed accoucheurs; yet I venture to disbelieve it. In the Foundling Hospital, where children are sent into the country to wet nurses for the most part married women, with another baby of their own to suckle besides, the following is the mortality, as given us in Mr. Brownlow's book before referred to.

Out of 100 children during the first five years of their lives, received at two separate periods, viz., from May 1835 to May 11837, and from May 1837 to March 1839, Mr. Brownlow showed the following mortality at the Foundling Hospital.

	1st period.		2nd period.
Deaths in first year of their age .	12	..	9
Deaths in second year of their age .	5	..	10
Deaths in third year of their age .	2	..	2
Deaths in fourth year of their age .	0	..	0
Deaths in fifth year of their age .	1	..	0
	20		21

The causes of death were—convulsions in 9; diseases of membrani glandia, 5; water on brain, 4; inflammation of bowels, 4; inflammation of lungs in 3; malformation of chest, 3; diarrhœa in 3; croup, 2; scarlet fever, 2; hydrocele, atrophy, bilious vomiting, scrofula, hooping-cough, teething, and breaking a blood-vessel, of each 1. This is the mortality in the country. The usual mortality is higher.

This result I think sufficiently favourable to justify our adoption of the plan. I am happy to learn that the celebrated Manchester accoucheur, Mr. Roberton, is in the habit of carrying out the same plan in that city, where breast-milk is needed, and the mother of an infant cannot supply it, to have a married woman, who suckles another child, to call twice a day to feed it.

There is but one more point I wish to allude to here, and it is the choice of country nurses for town children. I cannot help speaking in strong terms of reprobation of this custom. It almost invariably fails. A nurse accustomed to a country life, open air, and exercise, is scarcely likely to thrive in a close town, where she leads that sedentary life at home so necessary in London and other great towns. *Vice versâ*, the more exposed condition of life may not agree with a town nurse. Both will be likely to suffer. A town nurse, if healthy, should therefore be preferred for a town child, a country nurse for a child in the country. If the town child, however, is removed into the country, he comes under the second category, and will thrive better with a country nurse.

The full discussion of this point more properly belongs to the third and fourth parts of this paper, when we come to speak of other animal and vegetable substitutes for human milk. So much, however, may be said—that the ill success attendant on the combination of other kinds of food, as shown by Drs. Merei's and Whitehead's tables, afford no criterion, seeing that food was bread food, and seldom, if ever, judiciously given. The following valuable notice of deaths occurring at Brighton, and kindly forwarded to me by a lady correspondent, and one of the Committee of the Society for Improving the Sanitary Condition among the Lower Classes, can be relied upon, and emphatically enunciates the fact. It relates to the

Infant Mortality in Brighton.

Fifty cases taken from the books of the registrars of the several districts, shewing the age of each child, the cause of death as *certified*, with additional information obtained by personal inquiry into the method of feeding, etc.

1. Girl; aged 4 months. Died suddenly in a fit. Coroner's inquest.	Fed on boiled French roll, given with a spoon; very little breast-milk. Fed freely.
2. Boy; aged 9 months. Died of bronchitis and convulsions.	Fed on boiled rice and sago, and the breast. A fat heavy child.
3. Boy; aged 8 months. Died in a convulsive fit. Coroner's inquest. Alleged cause, teething.	Fed upon tea and *muffin* heartily the night before it died. Always ate heartily, and had also breast-milk. Was a very thin and puny child.
4. Girl; aged 7 months. Died of diarrhœa (during dentition).	Fed partly from breast, partly with boiled milk.
5. Boy; aged 5 weeks. Died of diarrhœa.	Fed partly from breast, partly with boiled milk.
6. Boy; aged 8 months. Died of hooping-cough.	Fed entirely from mother's breast.
7. Girl; aged 2 months. Died from want of breast-milk.	The mother died when the child was five weeks old. It was weakly from birth, and did not thrive upon the food given. The bottle was not tried.
8. Girl; aged 6 weeks. Died of bronchitis and convulsions. Death sudden.	The mother says it had nothing but the breast as food; and no drug or medicine, except given by a medical man.
9. Boy; aged 6 months. Died of hooping-cough and convulsions.	Had breast-milk the first four months; then bread and water food sweetened.
10. Girl; aged 3 months. Died of marasmus.	The mother, not having sufficient breast-milk, tried bread and milk, and then milk and water, without success.
11. Boy; aged 9 months. Died of mesenteric disease.	The child was weaned suddenly, and fed without judgment.
12. Girl; aged 3 months. Died of convulsions.	Fed entirely from mother's breast.
13. Boy; aged 5 weeks. Died of bronchitis.	Had boiled bread food, and the mother's breast.
14. Boy; aged 9 months. Died of diarrhœa and convulsions.	Was suckled by its mother till three months old; then put out to dry nurse, and fed with milk sop, arrow-root, beef-tea, mutton-broth, etc.
15. Child; aged 3 months. Died of convulsions.	Fed entirely from mother's breast.
16. Girl; aged 4 months. Died of marasmus.	Fed entirely from mother's breast.
17. Girl; aged 4 months. Died of diarrhœa and convulsions.	Partly fed from breast; also with all kinds of food, which the stomach rejected. "Delicate from birth".
18. Boy; aged 3 months. Died of diarrhœa.	Partly suckled; also had boiled French roll.
19. Boy; aged 5 months. Died of atrophy.	Had arrow-root—probably insufficient in quality.
20. Girl; aged 4 weeks. Died of convulsions.	Fed on mother's breast and arrow-root. Mother says it was an "eight months' child".
21. Boy; aged 10 months. Died of convulsions.	Mother's breast, and boiled French roll.
22. Child; aged 9 months. Died of convulsions.	Weaned at three months: then fed chiefly on gruel. Ailing from birth. Mother sickly.
23. Girl; aged 10 months. Died during dentition.	Nursed entirely from mother's breast.
24. Girl; aged 3 months. Coroner's inquest: verdict "affection of brain from overloading the stomach".	Two cups of arrow-root, milk, and water, in addition to breast-milk, within a very short time.
25. Girl; aged 6 months. Coroner's inquest: verdict "accidental death". No blame attached to nurse!	Suffocated by being overlaid by the wet nurse, a heavy sleeper. She was questioned as to taking any extra drink herself, or giving any narcotic to the child, who was often very restless.
26. Girl; aged 4 months. Died of marasmus.	Weaned at eight weeks; then fed on arrow-root and boiled bread. "Pined to a skeleton".
27. Boy; aged 8 months. Died of diarrhœa.	Born a fine healthy child; lost its mother in the first month; was put out to dry nurse, and shockingly neglected; removed to care of another person when 7½ months old; lived 13 days in a state resulting from starvation and disease. No coroner's inquest.
28. Boy; aged 4 months. Died of phthisis.	Partly suckled; partly fed. Constitutionally delicate.
29. Boy; aged 1 year. Died of phthisis and convulsions.	Ditto, ditto. The father of these two children (28 and 29) died of consumption; all three deaths occurred within a week or two.
30. Girl; aged 11 months. Died (as alleged) of constitutional debility. Died in a fit of convulsions.	Partly suckled by mother, partly fed, for six months: a pint of thick food three or four times a day. After six months, was put out to dry nurse; fed with bun and milk and gruel a few minutes before it died. Probably a case of over-feeding.
31. Child; aged 9 months. Died of bronchitis.	Suckled entirely by the mother.
32. Girl; aged 1 year. Died of hooping-cough.	Weaned at ten days old; fed on arrow-root and gruel.
33. Child; aged 6 months. Died of choleraic dysentery.	Weaned *suddenly* three weeks before death; fed on bread and milk.
34. Boy; aged 3 weeks. Died of "exhaustion of vital powers".	Suckled by a wet nurse; but fed also on rolls and cow's milk.
35. Girl; aged 9 months. Died of hooping-cough and pneumonia.	Suckled entirely by the mother.
36. Boy; aged 6 months. Died of convulsions.	One of twins; suckled by the mother; also fed on prepared barley. Ailing from birth.
37. Boy; aged 3 months. Died of hooping-cough.	Suckled by the mother.
38. Child; aged 1 month. Died of "constitutional weakness".	Suckled entirely by the mother.
39. Boy; aged 1 month. Died of "diseased stomach".	Fed on cow's milk and water.
40. Girl; aged 8 months. Died in dentition.	Fed on the mother's breast.
41. Child; aged 9 months. Died of bronchitis.	Brought up by hand, on new milk and tops and bottoms.
42. Girl; aged 6 months. Died of pneumonia.	Fed partly from breast; partly with biscuit powder and cow's milk.
43. Girl; aged 7 months. Died of convulsions during dentition.	Fed entirely on cow's milk and water. Dentition unusually early; ten or twelve teeth in seven months.
44. Boy; aged 5 months. Died of hooping-cough and convulsions.	Fed partly from mother's breast; also on bread sop.
45. Child; aged 1 year. Died of hydrocephalus.	Always fed a great deal (the mother having difficulty in suckling). When weaned, had anything (*i.e.*, everything). Convulsions came on with teething. Treatment consisted of blister to top of head, mustard to the back of the legs and neck, and leeches to the temples.

46. Boy; aged 1 year. Died of convulsions.	Partly fed from mother's breast; also with boiled bread.
47. Girl; aged 2 months. Died of diarrhœa.	Very little breast-milk; had baked flour and biscuits boiled.
48. Child; aged 5 months. Coroner's inquest: verdict "overfeeding".	These cases happened together in the same house. The child of a wet nurse, and her nurseling, were fed on a hearty supper of bread food; and were found dead at 4 A.M.
49. Child; aged 7 months. Coroner's inquest: verdict "overfeeding".	
50. Child; aged 4 months. Coroner's inquest: verdict "overfeeding".	A similar case to the preceding two.

These 50 cases may be thus classified:—

Convulsions (in 7 coroner's inquests, verdicts "overfeeding": several not investigated)	22
Diarrhœa and other disorders of stomach and bowels	12
Total cases traceable to overfeeding and injudicious feeding	34
Or per cent.	68

The other cases (16 in number) were affected with hereditary, structural, developmental, and epidemic diseases: most probably in these cases death was wholly independent of *diet*. At least, it is remarkable that in these last named 16 cases, the children were in general either fed from the mother's breast entirely, or if brought up by hand, were fed with more judgment than is commonly observed.

The cases of convulsions (Nos. 12 and 15), I have been unable to trace to any cause. They were not hand-fed at all; and probably the attack in each might have been induced by some irregularity in the health or diet of the mothers.

Fed on bread food without the bottle: some having the breast in addition to bread food; some having other food, as sago, arrow-root, etc.:

Convulsions, or of diarrhœa	24
Fed entirely from mother's breast	11
Fed from the bottle	1
Fed entirely on cow's milk and water	2

Clearly, therefore, no conclusion can be drawn from the above facts that admixture of food, if *judiciously* combined with the mother's milk, is injurious. Indeed, the conclusion would be rather that death was less likely to occur in those fed on cow's milk and water than in those fed exclusively on their mother's milk. To do this, however, where so few cases so fed are given, would be unphilosophical.

52, Montagu Square, London, November 1857.

ANEURISM OF THE ABDOMINAL AORTA.

By Thomas Smith, Esq., Surgeon, Crawley, Sussex.

N. M., aged 31, by trade a tailor, short, but well formed, particularly about the chest, was out shooting in the first week of February last, and on jumping over a hedge was seized with a sudden sharp pain in the back. He went on for about thirty yards, when he was compelled to lie down from the severity of the pain; he, however, subsequently walked home. In a few days the pain subsided in a great measure, and he took no further notice of it until March 11th, when he first applied to me.

I found but little tenderness in the loin, but a good deal running down the left spermatic cord. As there was constipation, with some tenderness in the bowels, I gave him a purgative, which so much relieved him, that I saw no more of him for a month. At this time he appeared to be suffering from rheumatism, for which I gave him guaiacum, etc. There was no pain on percussion down the spine, a little in the region of the left kidney, more in the groin, and very much on the upright motion. The urine being scanty and muddy, my assistant was led to examine it, and found a notable quantity of albumen, and gave him quinine. The appetite, before very bad, became good; and the urine lost the albumen. This, however, did not last more than a fortnight, when his appetite again failed; he wasted fast; the pain increased, became paroxysmal; and at length, in the month of August, he took to his bed permanently.

The pain became most intense, running down the leg, front and back, to the knee and foot. His position in bed was now remarkable, half reclined, with the hollow of the back so filled up with pillows as to make the vertebral column arch backwards, whilst the legs were drawn up as much as possible.

On careful examination, I one day found a preternatural fulness on the left side about midway between the cartilages of the ribs and the ilium, but extending upwards behind the false ribs. There was very perceptible pulsation; but no aneurismal sound could be heard. The heart's sounds, however, were thought to be distinguished through the tumour, which continued to increase in size, and at length seemed to point backwards about two inches from the spine.

My assistant diagnosed the case as one of encephaloid growth around the aorta, involving the kidney. A brother practitioner, whom I asked to form an opinion, thought it was a large abscess depending on disease of the vertebræ. My own opinion was that it was a dissecting aneurism of the aorta; but I was wholly unable to account for the disease, and for the altered appearance of the patient, until the discovery of the tumour.

All through the month of September, the patient went on from bad to worse, taking nothing but rum and milk, wasting to a skeleton, and getting but little sleep, even with the aid of large doses of liquor opii sedativus and chloric æther. Twice he had fits of faintness, and was apparently *in articulo mortis*, but rallied. At one time he was threatened with paralysis of the bladder; but that passed off. The skin over the tumour now began to look red, and threatened to break, but he died on October 3rd, without this event happening; and, agreeably with the wishes of the deceased and my own, we examined the body eighteen hours after death.

The body was wasted as much as I ever saw one. On dissecting the parietes of the abdomen off the tumour, I first saw the descending colon lying on the upper surface quite flat, but healthy; on dissecting a little further, the left kidney was exposed, also much flattened, scarcely more than a quarter of an inch thick, and a quarter the natural weight, but healthy. The tumour was then opened. Towards the anterior and outer surface, the sac was very thin: first, a large quantity of fluid blood poured out, then I removed a quantity of clots in every stage, from blood and serum and lymph to well formed fibrine. Feeling my way carefully, I at length found an opening into the aorta, opposite to the part where the cœliac artery is given off, large enough to admit two fingers. I laid the vessel open, and found it perfectly healthy; the margin of the opening being rounded, slightly thickened, and smooth. The sac extended downwards as far as the iliac hollow, resting on the quadratus lumborum muscle; on the right side it formed as it were a tube, running down by the vertebral column, a little way into the pelvis; the body of the first lumbar vertebra was wholly absorbed as far as the spinal canal, and the second to a great extent. The abdominal viscera were quite healthy, as were the lungs. The heart was pale, flabby, and seemed much wasted.

Remarks. The principal points in this case demanding particular notice appear to be: its early obscurity, the simulations and symptoms of other diseases arising in its course, the absence of any aneurismal sound, and especially the extreme rarity of cases of aortic aneurism, in which the origin can be fairly, or, with good presumptive evidence, traced to accidental and external causes.

The history of the injury was not obtained until after the tumour was discovered, when my suspicions were awakened as to its nature, and led to the inquiry as to the cause—the patient hitherto never having alluded to the accident.

We all know how difficult abdominal tumours are of diagnosis, how aneurisms of the aortic and iliac arteries have been mistaken for malignant fungoid disease, and that the absence of the aneurismal whirr, so called, is now taken to be anything but certain evidence of the absence of aneurism. The large size of the opening, the smoothness of its edges, and even continuity with the rest of the vessel, probably account for the absence of the *bruit*.

It may be asked, Is this a case of traumatic aneurism? To my mind the pain, unceasing (although occasionally much mitigated, it is true), and in character such as might arise from pressure, and dating directly from the fall, and the albuminous urine appearing early in the progress, establish a strong connection between the presumed cause and effect. The perfectly healthy state of the vessel immediately around, above, and below the opening, is worthy of notice.

With regard to the rarity of such cases, I cannot, in the few books at my command, find a case of aneurism of the aorta, in which the cause is attributed to direct violence. Much more might be said on this interesting subject.