Acrodynia: a case report of two siblings

Acrodynia, a rare disorder, is a form of chronic mercury poisoning. We report two siblings who developed the classic clinical picture of acrodynia.

A 4½ year old boy was admitted with dysuria, general weakness, and loss of appetite. He had hypertension (140/95 mm Hg) and tachycardia (141 beats/min). He was irritable and depressed, and had a diffuse itching papular rash with palmar erythema and superficial desquamation (fig 1). Initial evaluation revealed a normal complete blood count and a normal blood chemistry. Urine analysis and complement levels were normal. Vanillmandelic acid in a 24 hour urine collection was 22.2 µmol/day. Duplex scan of the renal arteries, abdominal ultrasound, and computerised tomography (CT) of the chest and abdomen, were all normal. Heart echocardiography showed mild hypertrophy of the myocardium. TSH was 5.53 mU/L, and free thyroxine 24.45 pmol/L. A brain CT scan revealed a point calcification at the right caudate nucleus and several bilateral areas of low density in the white matter. EEG was normal. A successive complete blood count revealed haemocytome (haemoglobin 165 g/l and haematocrit 48.1%). After eight days, the patient’s 6 year old brother was admitted with general weakness, pain in his lower extremities, and a diffuse itching papular rash with palmar erythema and superficial desquamation. He was hypertensive (126/87 mm Hg) and tachycardic (140 beats/min).

Due to the fact that both siblings presented, at the same time, with more or less the same complaints and physical findings, it was suspected that their condition may have been the result of an environmental exposure. It was discovered that three months previously, the children had played with a broken sphygmomanometer for a few weeks.

Urine mercury level for patient 1 was 158 µg/g creatinine and for patient 2, 113 µg/g creatinine. Urine mercury level for patient 1, after a dose of captopril (chelating agent), was 214 µg/g creatinine. Chelation was initiated with dimercaptoposuccinic acid for a 19 day course. Two weeks later, symptoms had almost resolved and the rash disappeared. A month later, blood pressure and heart rate had returned to normal.

Torres and colleagues’ published a review of eight cases of acrodynia. In all these cases, and in ours, the physicians first thought of phaeochromocytoma. Mercury inactivates an enzyme that participates in the breakdown of catecholamines, and therefore their concentrations increase, stimulating a phaeochromocytoma like syndrome.

Torres and colleagues also reported that in two of the patients reviewed, haemocytome was observed, most probably due to intravascular and extracellular volume depletion. This was also found in our patients.

The brain CT findings of low density in the white matter, in patient 1, were not specific. Neurological examination was normal apart from mental changes that are common in acrodynia. To the best of our knowledge, this is the first time that abnormalities in brain CT have been described in acrodynia.

In summary, acrodynia, although rare, should be considered in every child presenting with hypertension, tachycardia, mental changes, and cutaneous manifestations. This case emphasises the fact that good history taking is an essential element in even the most puzzling clinical pictures.

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References
therapy to be initiated in the early phase of lung hypertension in order to improve prog-

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References

R J Jefferson

Sudden infant death syndrome: problems, progress and possibilities

As an internationally recognised disease classification, sudden infant death syndrome (SIDS) is unique in that the diagnosis is reached by exclusion, by failing to demon-

strate an adequate cause of death. By definition it is imprecise, the diagnosis of SIDS depends on the thoroughness of the post mortem examination, the extent of detail given in the clinical history and the meticu-

lous nature with which the death scene investi-

gation is carried out. Even if these conditions are satisfied to some chosen specification, this is not an endpoint but a rather a beginning, as we are still left with the question of "why did these babies die?"

The tragedy of SIDS is not a modern phenomenon but was only christened a syndrome 40 years ago and, after extensive research, the possibility of finding a collection of symptoms and signs manifesting as a "single cause appears extremely unlikely. Some experts suggest a triple risk causal mecha-

nism for SIDS involving a vulnerable infant, the presence of an active infection, and the social and psychological circumstances at risk of SIDS, this book is also for them.

For me, much of this book was virgin terri-

tory, and I found it a good, readable introduc-
tion: although I would have liked the references manual for other researchers in the field. Given the rarity of SIDS, many medical professionals may not have come across this before and the unique choice of contributing experts gives a clear insight into current thinking and recent discoveries in different fields, while challeng-
ing the reader with a subtle consensus of disagreement. The book gives detailed back-
ground of each debate but is more than a refer-
ence manual for other researchers in the field.

If there appears to be a lack of co-ordination in the approach among different research groups, a slightly over zealous interpretation of findings by some experts and: perhaps more clarity in the overall picture, then this book has given a true reflection of SIDS research as it currently stands. There is no ending to the story because infants still die suddenly and unexpectedly, but if SIDS research is to be ultimately judged by the number of young lives so far saved then the endeavours of those involved should be highly commended.


Coming back to the new edition of this book is like coming back to an old friend. Like many paediatricians, I have used the first edition as a valuable reference in child protection cases. The expertise and experience of all three authors are well recognised internationally and there is no doubt that this edition will continue to be a valuable aid to all clinicians working with children. All aspects of abuse are covered and there are helpful summaries in each chapter. It is an easy book to read but also I find it easy to get information on individual issues in child pro-
tection. There is an interesting historical introduction: although I would have liked rather more before modern times.

The problem I find with this book is that it is not really evidence based in a modern sense. Papers are quoted with no real attempt to assess their quality. This is partially because there are so few quantitative studies in child protection but I think readers would have liked to have more descriptions on the quality of the methodology of the papers that are quoted. I would have liked the references tabulated in each area of abuse. There are also concerns regarding the section on epidemiolo-

gy of child abuse. The histogram that is used as an illustration does not give incidence rates nor is it population based. I particularly studied areas in the book that I knew could cause diagnostic difficulty and where there was controversy. One of these is subdural haemorrhage. I was disappointed that the section was quite short: only four pages. I was also disappointed at the number of references, only 14, in what is the most common cause of serious physical harm in physical child abuse.
I find that neglect and emotional abuse are areas where it is difficult to put facts together for a clear diagnosis. The section on neglect has a helpful list of points to look for in the potentially neglected child and also ways of assessing the whole family. I found the section on emotional abuse less helpful.

Child protection is a very difficult area for clinicians and many shy away from committing themselves to clear diagnoses. This new edition will help give more confidence in dealing with these difficult cases. It is a pity that at nearly £70 it will not be accessible to young doctors outside libraries. Perhaps fewer photographs and being in paperback would make it less expensive and more accessible.

J R Sibert

Mosby’s atlas and text of pediatrics and child health


I enjoyed reviewing this book aimed at students and doctors in training, and I also learned from it. I must add that it is a good source of information for doctors who are preparing for examinations.

The book gives useful information, is highly illustrated and the format with text boxes and lists exists itself for easy reading and reference (revision for examinations).

The photographs are well placed with the text and with excellent explanations, which accompany the photographs, x rays, and scans. The quality of the photographs are superb too, thus the clinical phenotypes, which the authors want to illustrate are clearly visible. I found the book easy to read and understand.

I am sure that this book will prove very useful and will fill the gap in the market, as it will attract those adult learners who learn visually. It lends itself for scan reading for revision.

I teach examination preparation courses and I will bring this book to the attention of candidates sitting the DCH and MRCPCH exams. I would think that the GP tutors who come across this book would find it helpful in their teaching too. Many of the illustrations and slides will enhance anyone’s teaching methods.

More books like this are needed in paediatrics and child health as the pictures and illustrations that the doctors see will enhance their learning (and retention) skills. With problem orientated teaching (and learning) that we now practise, this type of book and presentations would be a most welcome addition. The market is not saturated, and I hope it will never be.

S Lingam

CORRECTION

Unfortunately the authors for the items in the Archimedes articles for September and November 2001 were not correctly coded and do not show up using searches on ADC Online or Medline. The authors for these articles should be cited as follows:

September


November

