men with previous definite myocardial infarction or other pre-existing ischaemic heart disease. Instead, serum total cholesterol concentration seems a much better lipid measurement to combine with other risk indicators in identifying subjects with a high risk of subsequent major ischaemic heart disease.

CONCLUSION

Our prospective findings in a large representative sample of British middle aged men confirm the view that serum total cholesterol concentration is the most useful single lipid measurement in identifying patients at high risk of ischaemic heart disease. The inverse association of high density lipoprotein cholesterol concentration with risk was also confirmed but was of lesser predictive value. Once total cholesterol concentration has been measured the measurement of high density lipoprotein cholesterol concentration may be of marginal additional value in general population screening and in intervention programmes for risk of ischaemic heart disease. Serum triglyceride concentrations are not relevant to the prediction of ischaemic heart disease in the general male population once these two measurements have been taken into account. Widespread use of measurements of triglyceride concentration and drugs to lower that concentration may be without justification.

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Accidental vulval injuries in childhood

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In girls the three most common types of accidental injury to the external genitalia are injuries caused by straddling, accidental penetration, and tearing due to sudden forced stretching of the perineum when the legs are abducted suddenly, such as can occur during gymnastics or in some falls.^{1,2} Accidental injury to the hymen is rare.³ Children with accidental injuries to the external genitalia should be referred to a paediatrician so that possible sexual abuse is not missed. Patients and families must be handled sensitively so that they do not think that they are under suspicion.

Accidental injury was diagnosed in 13 patients

referred over the past three years for a paediatric opinion. Over the same period about 100 children who had probably or definitely been sexually abused were seen.

Case 1—A would be gymnast lost her balance while walking along a horizontal metal pole and fell astride it. Her mother took her immediately to the family doctor, who referred her to a paediatrician. A complete and clear history was given. On examination there was a linear bruise 2 cm long on the inner surface of the left labium minus anteriorly, along the line of the underlying pubic ramus. The injury matched the history, and accidental injury was diagnosed.

The table summarises the 13 cases of accidental injury seen.

Comment

In straddle accidents injury is due to forced compression of soft tissues between the object straddled

Case No	Age (years)	History	Injury
<i>Straddle accidents</i>			
1	7	Fell astride climbing pole	Linear bruise 2 cm long anteriorly on inner surface of left labium minus along line of pubic ramus
2	9	Fell astride arm of chair	Severe bruising and swelling of clitoris and right labium majus
3	4	Slipped getting out of bath	Small graze of left labium minus anteriorly
4	5	Fell astride plank	Slight bruising of both labia majora anteriorly
5	5	Fell from bicycle	Haematuria due to minor urethral trauma
6	7	Slipped while standing pedalling a boy's bicycle	Anterior bruising and small abrasion; dysuria two days later; gardnerella in vulval swab
7	4	Fell on to chair with metal frame	Small linear bruise on inner right labium majus anteriorly, slight discharge
8	6	Fell astride wall	Presented with haematoma 2 cm in diameter on right labium majus two weeks after injury
<i>Stretch injury</i>			
9	2	Fell, then slid downstairs	Superficial, 5 mm long tear of posterior fourchette
<i>Penetrating injuries</i>			
10	2	Slipped and fell while carrying ballpoint pen	Minute superficial circular abrasion on inner right labium minus
11	2	Blood found on nappy; no history of injury	Superficial abrasion 5 mm long on inner surface of right labium majus; slight surrounding bruising
12	2	Blood found on pants; no history of injury	Minute superficial abrasion just inside left labium majus
<i>Uncertain straddle or stretch injury</i>			
13	11	Fell awkwardly, feet first, into swimming pool	Haematoma 2 cm in diameter in centre of right labium majus with surrounding bruising and minute abrasion over haematoma

and the underlying bone—that is, the pubic symphysis and rami. Such injuries may affect the mons, clitoris, urethra, and anterior part of the labia majora and labia minora. They are often linear and coincide with the underlying bone. They do not extend back as far as the vaginal opening. When there is a clear and complete history of an accident caused by straddling, prompt referral, and characteristic injury (as in cases 1-5) sexual abuse can be excluded.

Two patients (cases 6 and 7) did not present because of the original injury but because of subsequent vulval discharge. In one of them (case 6) the discharge was cultured and grew *Gardnerella vaginalis*, raising suspicion of possible sexual abuse even though the history of the accident was clear, detailed, and consistent. Gardnerella is not a strong indicator for sexual abuse; it was isolated from 4.2% of a control group of prepubertal girls.⁴ Another patient (case 8) presented late because her parents became concerned at finding a haematoma.

In cases 9-13 the possibility of sexual abuse was considered seriously and a complete medical and social history was taken. In case 13 the child was also seen by a skilled interviewer; we concluded that her injury was

probably caused by the combination of sudden contact with the water and forced abduction of the legs. In each of these cases accidental injury was diagnosed on the basis of the history and shared opinions of doctors and social workers.

The possibility of sexual abuse must always be considered when children present with vulval injuries. All cases should therefore be referred to a paediatrician. When there is a clear and detailed history of an accident and prompt referral together with appropriate findings on examination accidental injury can usually be diagnosed. In other cases a complete and sensitive inquiry into social background should be arranged.

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Meningitis caused by *Haemophilus influenzae* type b infection after epiglottitis

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Epiglottitis with *Haemophilus influenzae* type b infection most commonly occurs in children older than 2 years and is often associated with bacteraemia. Early treatment with antibiotics usually leads to an uneventful recovery. We report on a child of 13 months who developed meningitis seven days after treatment for epiglottitis was stopped.

Case report

A 13 month old white girl was admitted with a one day history of dyspnoea and stridor, and epiglottitis was diagnosed at laryngoscopy. Cultures of blood and material from a swab of the epiglottis both grew *H influenzae* type b that was resistant to ampicillin and

sensitive to chloramphenicol. She was ventilated in the paediatric intensive care unit and given chloramphenicol intravenously (104 mg/kg/day for 48 hours and 52 mg/kg/day for six days). She was extubated after 48 hours and when discharged on day 9 was clinically well and not receiving any drugs.

Six days later she was admitted with a two day history of fever and vomiting and signs suggesting an acute otitis media. After taking oral ampicillin for 48 hours she had signs of meningitis. Cultures of cerebrospinal fluid and blood grew *H influenzae* type b. She was given chloramphenicol (100 mg/kg/day) intravenously for 24 hours and cefotaxime (260 mg/kg/day) for a further 11 days. Oral rifampicin (20 mg/kg/day) was given for four days after treatment with cefotaxime was stopped, and she was discharged on day 16. One month later she was well and neurologically normal.

Isolates of *H influenzae* grown during the episodes of epiglottitis and meningitis were identical for serotype, biotype, patterns of antibiotic resistance and profile of the outer membrane proteins. All immunological measurements (including concentrations of immunoglobulins and complement) were normal for the patient's age.

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