Rest tremor

Consider underlying cause

Parkinson's disease suspected

Psychogenic tremor

Drug-induced tremor

Holmes (rubral) tremor

Tremor with other neurological disease present

Go to Parkinson's disease - suspected

Refer to neurology

Discontinue suspected offending drug

Refer to neurology

Refer to neurology

Review and refer to neurology as appropriate

IMPORTANT NOTE
Locally reviewed refers to the date of completion of the most recent review process for a pathway. All pathways are reviewed regularly every twelve months, and on an ad hoc basis if required. Due for review refers to the date after which the pathway on this page is no longer valid for use. Pathways should be reviewed before the due for review date is reached.
1 Rest tremor

Quick info:

Scope:
• this page provides information on the different causes of rest tremor

Definition:
• rest tremor is present in a body part that is not voluntarily activated and is completely supported against gravity
• often caused by Parkinson's disease and other causes of parkinsonism
• however other causes of rest tremor should be considered

Features of Parkinson's disease:
• typical unilateral onset of tremor in hand and occasionally a leg
• "pill rolling tremor" rare but a characteristic of Parkinson's disease
• rest tremor present in 70% of Parkinson's disease patients (practical tip - to induce rest tremor ask patient to count down from 10 out loud)
• Look for
  • facial or vocal impassivity
  • reduced arm swing on walking and shoulder shrug test (look for arm swing whilst shaking patient's shoulders)
  • cogwheel rigidity
  • bradykinesia
  • micrographia
  • postural instability
• refer to a person with expertise in Parkinson's disease prior to instigating medication

Main causes:
• Parkinson's disease (see pathway)
• other causes of parkinsonism
• drug-induced tremor
• dystonic tremor syndromes
• severe essential tremor
• Holmes tremor (also termed rubral)
• psychogenic tremor
• Wilson's disease
• vascular parkinsonism - multiple system atrophy, progressive supranuclear palsy
• drug induced parkinsonism - phenothiazines, metoclopramide, hydrocephalus, encephalitis, toxicity (eg. manganese)

Investigations:
• routine biochemistry, including thyroid function, liver function tests, calcium & phosphate
• Other possible investigations:
  • to rule out Wilson's disease-copper studies if <50 years old at onset, but still consider if >50 years
  • dopamine transporter scan
  • consider genetic tests in appropriate cases
  • in young people (less than age 30 years) consider diagnostic studies to rule out Wilson's disease

Reference:

3 Parkinson's disease suspected

Quick info:

Features of Parkinson's disease
• typical unilateral onset of tremor in a hand and occasionally a leg
• "pill rolling tremor" rare but characteristic of Parkinson's disease
• rest tremor present in 70% of Parkinson's disease patients (practical tip - to induce rest tremor ask patient to count down from 10 out loud)
• Look for
  • facial or vocal impassivity
  • reduced arm swing on walking and shoulder shrug test
  • cogwheel rigidity
  • bradykinesia (slow movements with decrement)
  • micrographia
  • postural instability
• refer to a person with expertise in Parkinson's disease prior to instigating medication
4 Psychogenic tremor

Quick info:
The following are clues to a psychogenic aetiology:
• history:
  • sudden onset, remissions or both
  • unusual combinations of rest, postural or intention tremors
  • somatization in past medical history
• consider medical causes for tremor with psychiatric illness (eg. Wilson's disease)
• Examination:
  • decreased tremor amplitude during distraction
  • variations in tremor frequency with distractions or voluntary movements of the other hand (entrainment)
  • co-activation sign of psychogenic tremor (tremor only present when arm is voluntarily stiffened)
  • appearance of additional and unrelated neurological signs
  • finger tremor is unusual in psychogenic tremor
  • simple reflex time studies
• consider other causes of tremor
• focus of treatment should be predominantly psychological

5 Drug-induced tremor

Quick info:
• can be caused by numerous drugs or drug withdrawal
• usually presents as postural tremor, but rest and/or intention tremors may occur
• Commonly associated with:
  • alcohol
  • sympathomimetics
  • bronchodilators - β2 agonists
  • theophylline
  • caffeine
  • dopamine
  • epinephrine and norepinephrine
  • lithium
  • sodium valproate
  • antipsychotic medication
  • anti-emetics (metoclopramide, prochlorperazine)
  • tricyclic antidepressants
  • corticosteroids
NB. any drug with a primary effect on the central nervous system can produce tremor as a side-effect

6 Holmes (rubral) tremor

Quick info:
• Typically three tremor components are present: rest, postural tremor and intention tremor
• often severe. The action tremor severity is usually greater than that of the rest component
• slow (frequency <4.5Hz) irregular tremor
• tends to involve proximal (action tremor) and distal (rest tremor) muscles
• Holmes tremor has numerous causes including stroke, vascular malformations, tumours, head injury, toxoplasmosis, major tranquilizers, radiation
• typically 2 weeks to 2 years delay from causal lesion to tremor onset
• lesions typically sited in midbrain or thalamus
• structural imaging (MRI scan) recommended
• dopamine transporter scan often abnormal
• multiple sclerosis is a rare cause of Holmes tremor

7 Tremor with other neurological disease present
Quick info:
- multiple sclerosis (predominantly postural and intention tremor)
- peripheral neuropathy (predominantly postural and intention tremor)
- Wilson's disease
- hereditary ataxia
Resting tremor
Medicine > Neurology > Tremor

Key Dates

Due for review: 31-Jan-2009
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