Chronic tension-type headache differential diagnosis and treatment strategies

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Abstract

Chronic tension-type headache (CTTH) is a primary headache disorder defined by headache occurring on ≥15 days per month for >3 months, typically bilateral, pressing/tightening, mild–moderate, and not worsened by routine physical activity. Because chronic daily headache has many possible causes, accurate diagnosis requires careful differentiation from chronic migraine, medication-overuse headache, and secondary headaches with red flags. Management is best approached with (1) education and trigger/behavioral modification, (2) evidence-based acute therapy avoiding opioids and minimizing frequent analgesic use, and (3) preventive treatment—most consistently supported for amitriptyline—plus nonpharmacologic approaches such as exercise and psychological interventions when relevant.

Keywords

chronic tension-type headache; chronic daily headache; differential diagnosis; chronic migraine; medication-overuse headache;

Introduction

Tension-type headache is the most common primary headache disorder, and its chronic form is a major driver of disability, reduced productivity, and medication overuse. CTTH is characterized by frequent or continuous headache that is typically bilateral and “tight” or “pressure-like,” often accompanied by pericranial muscle tenderness and heightened pain sensitivity. Clinically, the key challenge is that chronic headache phenotypes overlap: CTTH can coexist with migraine

features, and medication overuse can transform the clinical picture into near-daily pain. For this reason, modern recommendations emphasize careful phenotyping (often using a headache diary), screening for overuse, and identifying secondary causes when warning signs are present.

CTTH is diagnosed when headache occurs on ≥15 days/month on average for >3 months, lasts hours to days (or may be unremitting), and has at least two typical features: bilateral, pressing/tightening (non-pulsating), mild–moderate intensity, not aggravated by routine physical activity. Associated symptoms are limited: no more than one of photophobia, phonophobia, or mild nausea, and no moderate/severe nausea or vomiting.

Treatment strategies.

Step 1: Education, diary, and lifestyle foundations

Most guidelines recommend a headache diary for at least several weeks to document frequency, severity, associated symptoms, medication use, triggers, and menstrual association (if relevant). This clarifies diagnosis (CTTH vs chronic migraine), exposes medication overuse, and provides a baseline to judge treatment response.

Key foundational measures include regular sleep, hydration, consistent meals, ergonomic adjustments, stress management, and addressing comorbid anxiety/depression and sleep disorders.

Step 2: Acute treatment

For acute CTTH attacks, NICE recommends considering aspirin, paracetamol (acetaminophen), or an NSAID, balancing patient preference and adverse-event risks. NICE also advises: do not offer opioids for acute tension-type headache.
A major practical point is to avoid frequent use of acute medications to reduce the risk of MOH and chronification.

Step 3: Preventive therapy

Amitriptyline has the best-established evidence base for prevention of chronic tension-type headache and is widely recommended as first-line preventive pharmacotherapy in classic neurology guidance. The 2024 VA/DoD headache guideline also lists amitriptyline for prevention of chronic TTH.
In practice, it is often particularly useful when CTTH coexists with poor sleep or depressive symptoms (with attention to anticholinergic side effects and tolerability).

Step 4: Nonpharmacologic and combined approaches

Nonpharmacologic options can be valuable, especially when stress, muscle tension, or central sensitization plays a major role. A recent update review describes CBT approaches for TTH (e.g., cognitive restructuring, behavioral activation, relaxation) and notes the overall evidence base is limited but supportive in selected patients.
The VA/DoD guideline also supports physical therapy or aerobic exercise as part of management for TTH and migraine.

Conclusion

Chronic tension-type headache is defined by frequent (≥15 days/month) bilateral, pressing/tightening headache with limited associated symptoms and no worsening with routine activity. The main clinical task is accurate differential diagnosis—particularly distinguishing CTTH from chronic migraine and identifying medication-overuse headache—often aided by a structured headache diary.
Treatment is multimodal: use simple analgesics or NSAIDs judiciously for acute attacks, avoid opioids, address overuse, and implement preventive therapy when headaches are frequent or disabling. Among preventive options, amitriptyline remains the most consistently supported medication, complemented by

exercise/physical therapy and psychological interventions such as CBT where appropriate.

Literature

1. International Headache Society. ICHD-3: Chronic tension-type headache (2.3) — diagnostic criteria.
2. NICE Guideline CG150. Headaches in over 12s: diagnosis and management — diagnosis framework, diary recommendation, acute treatment, avoid opioids.
3. Bendtsen L, et al. EFNS guideline on the treatment of tension-type headache — amitriptyline as key preventive option.
4. VA/DoD. Headache Clinical Practice Guideline (Annals 2024) — acetaminophen/ibuprofen for TTH, amitriptyline for chronic TTH prevention, exercise/physical therapy.
5. Lee HJ, et al. Update on Tension-type Headache (recent review) — modern overview including nonpharmacologic strategies like CBT