tests for *Mycoplasma pneumonia*, *Legionella pneumophilia* and common viruses were negative. Active tuberculosis was excluded after tuberculin skin test and T-spot test. According to the criteria defined by an international consensus statement of experts,[1] the patient was diagnosed as primary antiphospholipid syndrome (APS) with PE and was treated with low molecular weight heparin followed by warfarin alone. The fever settled over one week and the patient was discharged on warfarin. The serum anticardiolipin IgG remained high positive 3 months later.

APS is a prothrombotic disorder predisposing to thrombocytopaenia, recurrent pregnancy morbidity, or thrombosis.[1,2] It can be divided into primary APS when it occurs alone and secondary APS when it occurs in association with other conditions. In this case, the only autoimmune antibody detected was anticardiolipin, and no evidence of infections was found.[3] Although rare, isolated fever can be a symptom of primary APS.[4] For this patient, persistent fever (over 39°C) unresponsive to anti-bacterial therapy was the major clinical manifestation. Anticardiolipin antibodies and D-dimer were strongly positive and an embolic disorder was therefore suspected. The patient responded well to the anticoagulant treatment, and the fever settled. We recommend that patients with an unexplainable persistent fever should be screened for primary APS and PE by testing for antiphospholipid antibodies and D-dimer.

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General correspondence

Hair-pulling and borderline personality symptomatology among internal medicine outpatients

Hair-pulling is the tugging at and removal of one's hair, which may result in observable bald patches. This syndrome may result in cosmetic breaches with significant secondary social impairment. While the prevalence of this syndrome in the general population is unknown, the prevalence of trichotillomania, a possibly related disorder, is present in 0.6–3.9% of college students.[1] This syndrome may be conceptualised as an impulsive or compulsive behaviour (e.g. hair-pulling is reportedly associated with other body-focused repetitive behaviours, such as skin-picking and nail-biting[2]). If impulsive, hair-pulling could be a self-destructive behaviour related to borderline personality disorder (BPD). In this study, we examined relationships between hair-pulling and borderline personality symptomatology (BPS).

Participants were males and females, ages 18 or older, being seen for nonemergent medical care at an internal medicine outpatient clinic staffed predominantly by residents. We excluded individuals with medical, intellectual, cognitive or psychiatric symptoms of a severity that would preclude the successful completion of a survey. This resulted in approximately 100 individuals being excluded mostly because they were not age 18 or older, or were not being seen at the centre (i.e. they were accompanying a patient). Initially, 471 individuals were invited to participate; 417 agreed to participate (88.5%). Of these, 379 completed relevant measures, 130 males and 249 females, ages 19–97 years (mean (M) = 50.30, standard deviation (SD) = 15.44). Most respondents (88.1%) were White, followed by African American (7.9%). Only 6.4% of respondents did not complete high school, whereas 14.7% reported a bachelor's degree.

During clinic hours, one of the authors (C.L.) approached incoming patients in the lobby, informally

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assessed exclusion criteria and invited candidates to complete a five-page survey. The survey consisted of three sections. In the first section, we inquired about demographical information. In the second section, with yes/no response options, we queried participants about hair-pulling (i.e. 'As an adult, have you engaged in hair-pulling [the repeated urge to pull out scalp hair, eyelashes, eyebrows, or other body hair, *resulting in bald patches*]?'). We wanted to ascertain explicitly the presence or not of this syndrome, not the degree of symptoms.

In the third section, we explored BPD using two self-report assessments – the borderline personality scale of the Personality Diagnostic Questionnaire-4 (PDQ-4)[3] and the Self-Harm Inventory (SHI).[4] The borderline personality scale of the PDQ-4 is a nine-item, true/false, self-report measure that consists of the diagnostic criteria for BPD that are listed in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*.[5] A score of 5 or higher is highly suggestive of BPD. Previous versions of the PDQ have been found to be useful screening tools for BPD in both clinical[6,7] and nonclinical samples,[8] including the use of the freestanding borderline personality scale.[9] The SHI is a 22-item, yes/no, self-report measure that explores participants' histories of self-harm behaviour.[4] Each item in the inventory is preceded by the statement, 'Have you ever intentionally, or on purpose, . . .'. Individual items include, 'overdosed, cut yourself on purpose, burned yourself on purpose' and 'hit yourself'. Each endorsement increases the possibility of pathology, with the SHI total score being the summation of 'yes' responses. SHI total scores of 5 or higher are highly suggestive of the diagnosis of BPD. Indeed, in comparison with the Diagnostic Interview for Borderlines,[10] a benchmark measure for the diagnosis of BPD in research settings, the SHI demonstrated an 84% accuracy in diagnosis.[4]

The study was approved by the Institutional Review Boards of the hospital and university. Participants were informed on the cover page that completion of the survey functioned as implied consent.

Eleven (2.9%) participants indicated hair-pulling. Compared with those who denied hair-pulling ($M = 2.00$, $SD = 2.21$, $n = 364$), those who indicated such behaviour ($M = 4.55$, $SD = 2.58$, $n = 11$) had higher scores on the PDQ-4, $F(1,373) = 14.00$, $P < 0.001$. Similarly, compared with those who denied hair-pulling ($M = 2.19$, $SD = 3.30$, $n = 361$), those who indicated such behaviour ($M = 6.73$, $SD = 6.28$, $n = 11$) had higher scores on the SHI, $F(1,370) = 18.31$, $P < 0.001$. In addition, a greater proportion of hair-pullers (45.5%) exceeded the PDQ-4 clinical cut-off score compared with the proportion who denied hair-pulling (16.5%), $X^2 = 6.25$, $P < 0.02$. Similarly, a greater proportion of hair-pullers (63.6%) exceeded the SHI clinical cut-off score compared with the proportion who denied hair-pulling (18.6%), $X^2 = 13.61$, $P < 0.001$.

Findings indicate that BPS is comorbid in a significant percentage of hair-pullers. BPS psychopathology suggests that hair-pulling is impulsive in nature in these individuals (i.e. possibly a self-injury equivalent) rather than compulsive – indicating a vastly different psychiatric treatment direction.

Potential limitations of this study include the self-report nature of the study measures (e.g. self-report measures for BPD tend to be overinclusive, which is why we use the term, BPS), the absolute small number of hair-pullers, the possibility that some of the excluded individuals may have reported hair-pulling and the absence of any assessment for adjunctive Axis I disorders that may have accounted for or contributed to hair-pulling (e.g. anxiety disorders). However, this is the only study to our knowledge to explore these variables in a consecutive internal medicine outpatient sample.

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