
What do healthcare providers ask their patients with immune thrombocytopenia?

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Clinical signs suggestive of immune thrombocytopenia (ITP) include bruising, petechiae, nose bleeds, genitourinary (GU) bleeding, gum bleeding, gastrointestinal (GI) bleeding, and gynecologic bleeding [1]. Clinical experience and adverse events in clinical trials reveal other ITP-associated symptoms such as arthritis, abdominal pain, sleep disturbances, headache, and fatigue. Asking patients about such symptoms supplements the platelet count in assessing disease status and impact, and thus helps in the design of a patient-specific management plan. A short practice patterns survey was administered to healthcare providers attending ITP Continuing Medical Education (CME) activities to assess the questions they ask patients in monitoring visits. A high percentage of respondents routinely ask about signs of bleeding and associated symptoms but not as frequently about health-related quality of life (HRQOL). Only 39% of respondents ask about difficulty with sleep. A short standardized questionnaire may be a useful tool to help healthcare providers gather information about their patients with ITP.

Several HRQOL instruments have been used for ITP. McMillan et al. [2] used the SF-36 questionnaire [3] to compare the HRQOL of 73 patients with ITP with a matched control group. The HRQOL of patients with ITP was worse than the general US population and of patients with hypertension, arthritis, or cancer. It was similar to that of patients with diabetes, although better than that of patients with congestive heart failure (CHF) or a missing or paralyzed limb.

The ITP patient assessment questionnaire (ITP-PAQ) probes physical health, emotional health, overall QOL, social activity, women's reproductive health, and work issues [4]. Snyder et al. [5] used a web-based survey to compare the HRQOL of 1,002 patients with ITP with 1,031 controls. Except for

bodily pain, all categories of the SF-36 questionnaire were worse for patients with ITP. The large patient base allowed comparison of the platelet count with ITP-PAQ items. Linear regression analysis showed that for 8 of 10 categories, there was a significant correlation between platelet count and scores. Only overall QOL and women's reproductive health did not correlate. The ITP-PAQ scale was used to evaluate patients in a clinical trial of a thrombopoietin agonist [6]. Patients receiving active treatment had significantly higher mean change scores than those receiving placebo in 7 of 10 categories.

A different tailored questionnaire was used to evaluate QOL in patients with ITP who received corticosteroid treatment [7]. The most frequent symptoms in treatment and control groups were fatigue, dry skin, sleep difficulties, and bruises. Of these, sleep difficulties and fatigue caused the most distress for patients. Because of the increasing interest in quantitative QOL in clinical research, we undertook a small study to evaluate physician practices in assessing patients with ITP.

Two hundred fifty-six participants in ITP CME activities answered questionnaires (Appendix 1). The participants practice in California ($n = 56$), New York ($n = 40$), Ohio ($n = 30$), and 30 other states ($n \leq 15$ each). Of the 245 participants who indicated the primary site of their practice, 27% were in academic hospitals, 23% were in community hospitals, 35% were in private practice, 6% were in clinics, and 9% indicated "other." The gender and age of participants were not collected.

Of 245 respondents, 18% are adult hematologists, 16% are adult oncologists, 6% are pediatric hematologists, and 4% are pediatric oncologists. 55% answered "other" but most of these did not specify their specialty. Forty-five participants identified themselves as adult hematologists and 40

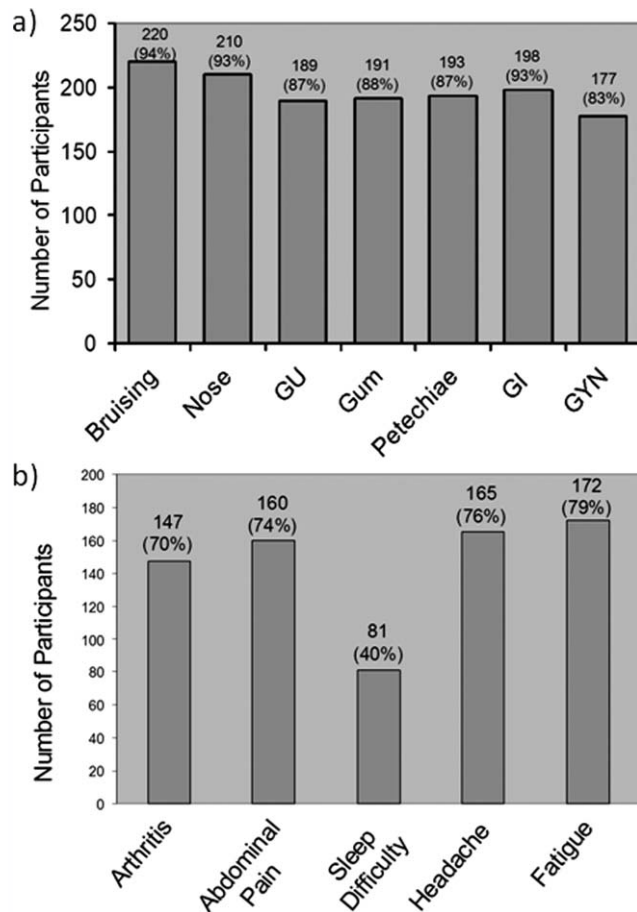


Figure 1. Numbers of respondents who asked their patients about (a) bleeding symptoms or (b) specific ITP-associated symptoms. GU, genitourinary; GI, gastrointestinal; GYN, gynecologic.

as adult oncologists. Almost half the participants were in practice for more than 20 years.

A quarter of respondents saw more than 10 ITP patients a year. The number of ITP patients seen per year was not correlated with the length of time in practice (Pearson $r^2 = 0.00015$). Most participants had low numbers of patients under active treatment (0–5 pts: 82%, 5–10 pts: 12%, 10–15 pts: 3%, and more than 15 pts: 3%). One hundred ninety-six participants reported seeing one or more patients with ITP per year and treating an average of 37% of them. Of 196 participants, 120 reported treating at least one patient with ITP per year.

A high proportion ($89 \pm 4\%$) of practitioners reported that they routinely ask patients about each of the bleeding-related symptom: bruises, nose-bleeds, gum bleeding and mouth sores, petechiae, GU bleeding, GI bleeding, and gynecologic bleeding (Fig. 1a). The most common question asked was about bruises (94%) and the least common was about gynecologic bleeding (83%). Some participants asked a general question about bleeding signs and proceeded to other issues if the patient answered negatively. Of the 110 participants who answered the question “Do you ask if there is any bleeding and if the answer is no, go on?,” 44% indicated that they do ask. At least 90% of the respondents asked about each of the bleeding signs, and all 84 who answered the question about bruising said they did ask about that sign.

Among the associated ITP symptoms (Fig. 1b), most participants reported that they ask patients about arthritis, abdominal pain, headache, and fatigue (70, 74, 76, and 79%, respectively). Only 40% of the 201 respondents reported asking patients about sleep difficulty. A total of 98% of the respondents did not address the open option of “other” in the associated symptoms question. Of the 256 participants, 196 (77%) asked women of childbearing age about pregnancy, while 19 (7%) did not. The remaining 16% did not answer the question. The subgroup of adult hematology and adult oncology participants had similar

rates of positive responses as the larger group; their rates were within 6 percentage points of the larger participant pool. Only 34% of the 77 adult hematologist and adult oncologist respondents asked about sleep difficulty.

Most respondents ($81 \pm 8\%$) asked their patients about medications. The most often discussed was prednisone (93%) and the least often discussed was thyroid replacement therapy (70%). The number of participants answering the survey in this category was consistent across the various answers (214 ± 4 of the total 256, 84%). Of the 210 participants who answered the question “Do you ask about alternative medications,” 78% responded in the affirmative. Participants who identified themselves as adult hematologists or adult oncologists had similar rates of inquiry on medications as the total group of respondents.

The small questionnaire used in this study was designed to probe physician behavior in managing follow-up visits with patients with ITP. The questions cover the common bleeding manifestations of thrombocytopenia, but also associated symptoms such as headache and fatigue, and those associated with medication. The questions addressed symptoms observed as adverse events in 20% or more of the control patients in a 24-week clinical trial [8]. Insomnia, gingival bleeding, and abdominal pain were observed in this cohort at lower rates but were also probed in the current survey.

Most of the questions were asked by 80–90% of the healthcare provider respondents with a few notable exceptions. Although thyroid disease may impact treatment outcome [9], thyroid replacement therapy was probed by only 70% of the respondents. Perhaps this subject was felt to be the purview of other healthcare providers or perhaps the respondents already possessed the relevant information.

An area that was addressed with patients by a minority of respondents (40%) was “difficulty sleeping at night.” Insomnia was reported in 7% of the ITP patients in the control group of a phase 3 romiplostim trial [8]. It also emerged as one of the most common symptoms uncovered in a recent study [7] and can occur as a side effect of corticosteroid therapy [7,10]. The physiologic relationship between ITP and insomnia is not clear, although sleep quality and quantity certainly contribute to QOL. Since patients with ITP suffer a diminished QOL and our survey reveals uneven exploration of the components of QOL by healthcare practitioners, a short standardized QOL instrument should be incorporated into routine monitoring of patients with ITP.

Methods

During 2008–2009, The France Foundation sponsored the ITP Community Case Exchange series of CME activities in the United States. These were designed for hematologists and oncologists looking to obtain practical information about adult ITP disease mechanisms, diagnosis, and management. A brief practice patterns survey (available on line) was administered after the activity. In 2008, the survey was conducted at small dinner meeting CME activities with an average attendance of 6.7 participants, but in 2009, the survey was distributed at various meetings such as regional conferences and grand rounds with a typical attendance of 20–50 individuals. Some participants did not answer all the questions; individual questions without responses were excluded from the analysis.

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Additional Supporting Information may be found in the online version of this article.

Conflict of interest: Nothing to report.

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