When a patient with chronic anemia is referred to a hospital with suspicion of acute blood loss, it could be difficult to identify the cause of the anemia. When the anemia is of a chronic nature, identification of the cause could be particularly difficult if the patient has been unaware of the underlying pathology. Iron deficiency arises from prolonged negative iron balance caused by a decrease in iron intake and/or blood loss. No menorrhagia or hematologic disease, apart from IDA caused by low iron intake, was present in our case preoperatively. Determination of serum iron level preoperatively would have been helpful to identify the exact nature of anemia, ie, chronic anemia or acute blood loss. Unfortunately, such tests were not performed preoperatively because of lack of menorrhagia or acute gastrointestinal blood loss. In the present case, because the patient's conscious level improved after parentral infusion, at the age of 19, she would have been able to make her own informed consent as to whether she would consent to blood transfusion instead of her parents' wishes. That is justified under the American and British law, but on the other hand, it is unclear under the Japanese law.

This report also presents a rare condition of twisted paraovarian cyst together with an ipsilateral polycystic ovary. Adnexal torsion is a well-known entity and has been adequately reported. Of the entity, 14.6% include paraovarian cyst.[4] On the other hand, torsion of a polycystic ovary has also been rarely reported.[5] However, to our knowledge, the condition, like in our case, has not been previously reported in the English literature.

In conclusion, when a patient with unexplained severe anemia was transferred, IDA of long duration caused by low iron intake should also be considered. In addition, when a Jehovah's Witness patient below age 19 required an emergent operation as a result of acute blood loss, because the patient's conscious level is clear, her own informed consent for blood transfusion should be made instead of her parents wishes.

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CLINICALLY SIGNIFICANT CHANGE IN PHYSICIAN-ASSIGNED NUMERIC PAIN RATING SCALE SCORES

To the Editor:—Estimates suggest that greater than 60% of ED patients present with conditions associated with pain.[1] Many hospital EDs currently assess adult patients' pain using an 11-Point Numeric Rating Scale (NRS-11). With this tool, patients are asked to choose one number, on a scale from 0 (no pain) to 10 (severe pain), corresponding with the intensity of their pain. Advantages of the NRS-11 include ease of administration and scoring, multiple response options, and no age-related difficulties in using the scale.[2,3] Additionally, the NRS-11 does not require patients to be sitting in an upright position, use of paper or pencil, or patient literacy.[4]

Previous investigations have evaluated clinically significant changes on the visual analog scale (VAS).[5,6] No prior investigations have addressed similar clinical significance of the NRS-11. We sought to determine the minimum clinically significant difference (MCSD) in physician-assigned NRS-11 score for the assessment of pain in a prospective, descriptive trial.

EM resident and attending physician (EPs) volunteers were enrolled in the study over a 3-month period. All physicians were employed at the investigating institution at the time of enrollment or had recently graduated from the hospital's EM residency program. Residents in this program do not receive formal training on pain assessment.

The hospital is a tertiary-care center with an annual ED census of 52,000 patient visits. Hospital Institutional Review Board approval was obtained for the study.

Ten written vignettes were ordered using a table of random numbers. Each described a patient presenting to an ED with acute pain, traumatic or nontraumatic in nature. Vignettes were one paragraph in length, and described the patient's illness or injury, appearance, and brief examination. These vignettes have been used previously by Todd et al. in a study of physician-assigned changes on the VAS.[5]

Written informed consent was obtained and subjects were instructed to read the first vignette. EPs were asked to rate their perception of the patient's pain intensity using the NRS-11. For each additional vignette, subjects repeated this process and compared the pain intensity of each patient with the pain of the patient in the previous vignette using one of the following descriptors: "a lot more pain," "a little more pain," "about the same pain," "a little less pain," or "a lot less pain." Participants were prevented from referring back to their previous scores as well as the prior written vignettes. This process continued for each of the 10 vignettes, resulting in nine comparisons made by each subject. Subjects were

TABLE 1. Demographic Characteristics of Study Participants

	No.	Percent
Male gender	30	83.3
Caucasian	36	100.0
Attending	19	52.8
Resident	17	47.2
PGY-1	5	26.3
PGY-2	6	31.6
PGY-3	6	31.6

TABLE 2. Mean Differences in Pain Scores by Category With 95% Confidence Intervals (95% CI)

Comparison Category	No.	Mean (standard deviation)	95% CI
Much less pain	33	2.91 (1.38)	0.21–5.61
A little less pain	122	1.50 (0.94)	1.32–1.68
About the same pain	49	0.53 (0.65)	0.35–0.71
A little more pain	54	1.33 (0.78)	1.11–1.55
Much more pain	66	3.92 (1.84)	0.31–7.53

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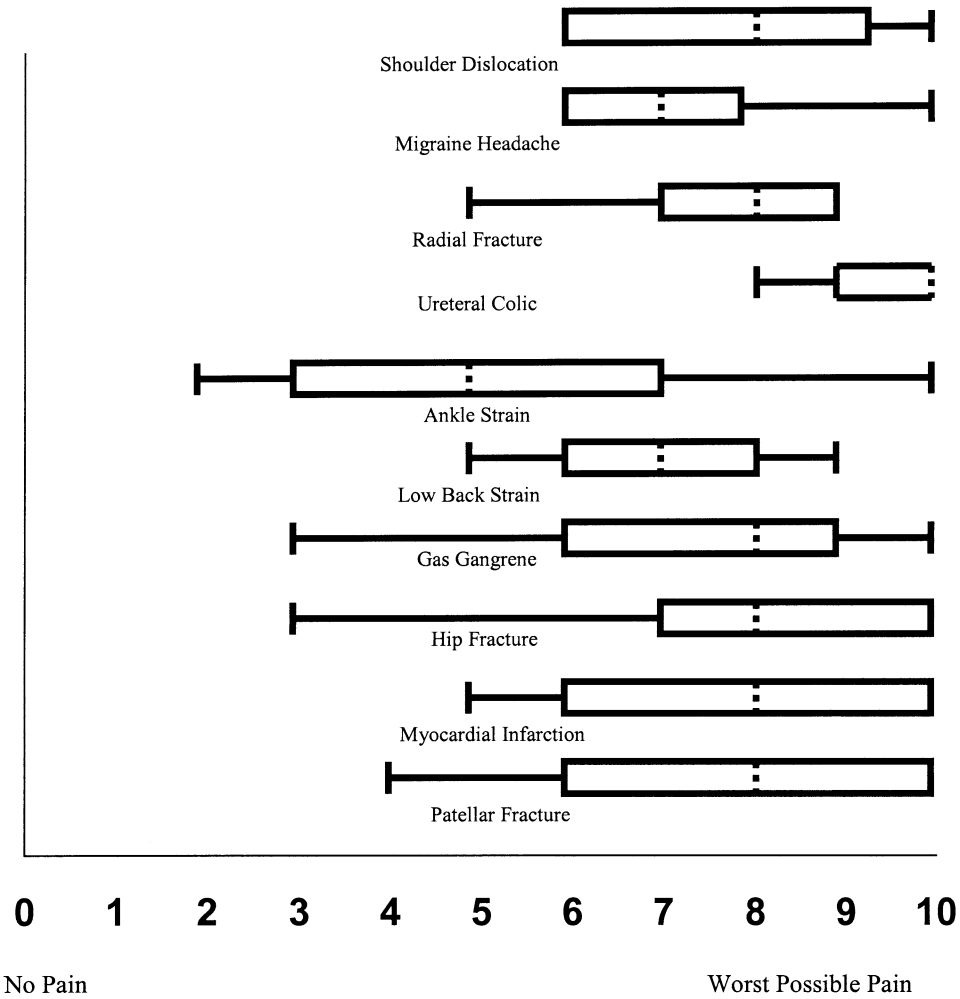

FIGURE 1. Median pain score, interquartile range, high and low scores for each vignette where the box represents 25th and 75th percentile, vertical dotted lines represent the median, and whiskers represent the range.

informed of the study objective on completion of the study protocol and were encouraged not to discuss the objective with colleagues until completion of the study.

The difference between pain scores and comparison scale descriptor were recorded for each pair of vignettes. We defined the MCSD as the difference in mean pain scores for the pairs rated either "a little more pain" or "a little less pain." Demographic data on characteristics of the study participants was collected (Table 1). Data was entered into a Microsoft 97 Excel spreadsheet program (Microsoft Corp., Redmond, WA) and was analyzed using NCSS 97 statistical software (NCSS, Kaysville, UT). Analysis used descriptive statistics, including standard deviations (SD) and 95% confidence intervals (CIs).

Thirty-six EPs performed 324 comparisons. Of these, 176 were rated as "a little less" or "a little more" painful. These 176 comparisons were used to determine the MCSD in pain scores. Table 2 displays the mean ± SD and 95% CIs for each category on the comparison scale.

For the 176 comparisons of interest, the mean difference in NRS-11 scores was 1.45, SD ± 0.84 (95% CI, 1.30-1.60). For each vignette, median pain score, interquartile range, and high and low scores are depicted as box plots (Fig 1).

There are several limitations to our study. The investigation was conducted at one institution where the majority of the participants were male, white, and well educated. Subjects rated the pain of vignette patients as moderate to severe. All patients described had acute illnesses or injury as their pain source. As a result, findings described might not be generalized to other physician populations or to patients with mild or chronic pain states.

Additionally, when compared with patients' self-reporting their pain experience, it has been shown that healthcare providers often describe a patient's pain intensity as less severe.[7] It can be argued that comparisons between scenarios lend themselves to value judgments and suppositions about the conditions illustrated, potentially introducing bias.

Our study provides a first estimation of the MCSD in acute pain scores as measured by the NRS-11. With this knowledge, investigators planning studies can more accurately perform power calculations to detect clinically important differences in pain states. Additional research is needed to determine the MCSD in NRS-11 scores self-assigned by ED patients experiencing painful conditions.

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ED PLACEMENT OF ARTERIAL SHEATH FOR ENDOVASCULAR MANAGEMENT IN MULTIPLE TRAUMA

To the Editor:—Hemorrhage control and prevention of secondary neuronal damage are major problems in acute trauma care. We present a case of cranial epidural hemorrhage and continuous bleeding resulting from pelvic fracture. To provide temporary percutaneous aortic balloon occlusion (TABO) for hypovolemic shock in the intra-operative period of craniotomy, we performed insertion of a sheath into the right femoral artery in advance of craniotomy.

A-40-year-old woman was brought to our institution after being struck by a car. Her vital signs were as follows: temperature 36.0°C (96.8° F), pulse 88 beats/min, and blood pressure 79/38 mm Hg. She was unconscious and sustained an unstable pelvic fracture. Initial fluid resuscitation improved her hemodynamics as follows: pulse 100 beats/min and blood pressure 126/70 mm Hg. Emergency computed tomographic scan revealed acute epidural hematoma in the right hemisphere (Fig 1) and continuous bleeding as a result of pelvic fracture (Fig 2). We judged that acute epidural hematoma was of immediate concern and that, because the patient showed hemodynamic improvement, craniotomy should be performed before endovascular management of the bleeding pelvic vessels. An 8-Fr 10-cm sheath through the right femoral artery was inserted percutaneously in the ED. The purpose of this action was to facilitate immediate intraoperative TABO should the patient become unstable. We performed emergency craniotomy with the aim of evacuation of the epidural hematoma. Her postoperative vital signs were as follows: pulse 120 beats/min and blood pressure 104/46 mm Hg. We performed angiographic embolization of the branches of the left internal iliac artery through the sheath, which had been inserted preoperatively (Fig 3). The patient subsequently made a full recovery. At this time, the patient has remained asymptomatic for 11 months.

FIGURE 1. Brain computed tomography scan showing epidural hemorrhage (arrows) and extravasation of contrast media (arrow) resulting from pelvic fracture (small arrow).

The management of patients with multiple trauma is a complex task and requires a multidisciplinary approach.[1-3] The most important considerations within the first hours after trauma are adequate hemorrhage control and the prevention of secondary neuronal damage.[1,2] Although angiographic embolization for the control of hemorrhage resulting from pelvic fracture are reported to be effective, emergency craniotomy could be needed for prevention of secondary neuronal damage. Thus, the determination of the therapeutic sequence for severe multiple trauma is still difficult and controversial.[1-3]

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FIGURE 2. Computed tomography scan of pelvis showing extravasation of contrast media (arrow) resulting from a pelvic fracture (small arrow).