

Morning Rounds and the Search for Evidence-based Answers to Clinical Questions

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Morning rounds is a time-honored clinical activity in modern American teaching hospitals. One story has it that bedside rounds originated with Sir William Osler at the Johns Hopkins Hospital in Baltimore and literally were named for the unique circular architecture of the original building that caused the faculty and residents to go round from ward to ward to see their patients. Sit-down teaching sessions developed with time and became known as chart rounds, dry rounds, sit-down rounds, or simply morning rounds.

Morning rounds have been part of our family practice residency program at the University of Washington since its inception in 1972. The now thrice-weekly rounds are conducted at the model teaching unit, the Family Medical Center (FMC). Attendees include the first-year and second-year residents who are on the family medicine inpatient service, third-year residents on call for the FMC, third-year residents scheduled to see patients in their continuity clinic that morning, the inpatient attending faculty, other faculty, a clinical pharmacist, a behavioral science coordinator, physician assistant faculty, nurses who handle daytime telephone triage and follow-up, a social worker, a medical librarian, and medical and pharmacy students. This meeting has from 12 to 20 participants and allows for wide-ranging input. Telephone calls, emergency department visits, inpatients (including obstetric), interesting clinical problems, problem patients, and mini-didactic presentations form the grist for discussion and teaching. Often these brief clinical presentations give rise to questions to which there are no clear answers. One of the participants, usually a faculty member or resident, will take on the challenge of finding the answer to present at a future morning rounds session.

It turns out that in real-life practice definitive answers are often difficult to determine. This report describes the process of searching for an answer to what appeared to be a relatively simple clinical question: When should postlactation amenorrhea be investigated?

A Brief Case Report

A third-year resident described a healthy 32-year-old new mother who was 6 months postpartum. She had a normal pregnancy, labor, and delivery and had breast-fed successfully for 3 months after giving birth. She was concerned because she had not resumed menstruating since she stopped breast-feeding. The resident had ordered prolactin and thyroid-stimulating hormone (TSH) measurements, but was challenged to defend that decision. Was this patient not still within the normal expected time for amenorrhea following delivery or cessation of breast-feeding? No one at the meeting knew with certainty the answer to that question, which led to the time-honored quest to find a definitive evidence-based answer.

The Search for an Answer

The obstetric textbooks in the FMC reference library¹⁻³ did not address the specific question at all, so the next step was to conduct a literature search. The medical librarian had attended the morning rounds and, therefore, was familiar with the issue. She composed a MEDLINE search from 1990 to the present using the following MeSH terms and key words: "postpartum or post-pill fertility," "ovulation," "menstruation." It turned out that this topic was not well indexed; nonetheless, 31 references with abstracts were retrieved. On a review of the abstracts three articles⁴⁻⁶ were found that might contain the desired information, and reprints were obtained.

As might be expected, the precise answer to our clinical question was not directly addressed in the articles, but some inferences could be made from the available data. It is important to appreciate that this literature search was not intensive but

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rather a reasonable step in elucidating what at first blush appeared to be a rather straightforward clinical question.

Srinivansan et al⁴ studied the determinants of breast-feeding and postpartum amenorrhea in Orissa, India. A random sample of 5000 households was surveyed. The average duration of breast-feeding was 27.4 months with a mean postpartum amenorrhea of 10.3 months. The duration of breast-feeding correlated strongly with longer periods of postpartum amenorrhea, as follows: for breast-feeding for 0 to 11 months, the mean postpartum amenorrhea was 7.7 months; for breast-feeding 12 to 23 months, mean amenorrhea was 8.4 months; and for breast-feeding 24 to 35 months, the mean amenorrhea was 11.3 months. The data presented in this Orissa study, however, did not address the specific clinical question raised regarding our patient.

Short et al⁵ described a prospective study of lactational anovulation and amenorrhea in a group of 101 Australian women who continued to breast-feed for the duration of the study. The purpose of the study was to determine the contraceptive effects of extended lactation, so any answer to our question is only incidental. Their data showed a mean duration of lactational amenorrhea of 9.5 months (SD 4.9 months) and a mean duration of anovulation of 10.6 months (SD 5.0 months) in these lactating women. This study also did not address the specific question regarding the resumption of menstruation in a woman who had stopped lactating 3 months previously.

The duration of postpartum amenorrhea correlated with breast-feeding was studied in a Danish sample of 361 women.⁶ The median duration of amenorrhea was 17 weeks, and the 25th and 75th percentiles were 10 and 30 weeks, respectively. The duration of postpartum amenorrhea in relation to the duration of breast-feeding revealed a significant correlation for women who breast-fed for less than 39 weeks ($P < 0.001$). Lactation for more than 39 weeks did not extend the duration of postpartum amenorrhea. In this study, 57 percent of women menstruated before weaning. After weaning 79 percent menstruated within 4 weeks and 93 percent within 8 weeks. This brief literature review informs us that our patient was probably within the normal expected range for amenorrhea because she was only 6 months postpartum, but she had also weaned the

infant 3 months earlier. So the question remains, Should a work-up for amenorrhea have been initiated in this specific patient?

Because the answer might be in research published earlier than 1990, MEDLINE was searched a second time from 1966 through 1990 using the same MeSH terms. This search produced 57 references. Based on the titles and abstracts in the printout, the focus of these studies was either on the effectiveness of the duration and frequency of lactation in preventing ovulation, lactation as a means of contraception, nutritional status and ovulation, or physiologic studies of prolactin gonadotropins and the pituitary-ovarian axis.

Reprints of three articles were obtained,⁷⁻⁹ but only one⁹ addressed the specific clinical question. This study also was directed at comparing nursing and nonnursing mothers and conception rate. The anovulatory period for postpartum amenorrhea was longer and the number of anovulatory cycles was greater for nursing mothers. By 4 months postpartum 100 percent of non-breast-feeding mothers had menstruated (32 percent by 1.3 months and 84 percent by 2 to 3 months). Of the 98 breast-feeding women who did not have a first postpartum menstrual period while nursing, only 50 had recorded the dates of first flow after cessation of nursing. Of these, 29 (58 percent) resumed menstruation after 1 month and 46 (94 percent) by the end of 2 months.

As a next step in the process, a telephone call was placed to one of the obstetric faculty on staff. When should postlactation amenorrhea be investigated? The obstetrician's advice was as follows: In an otherwise asymptomatic woman, wait at least 6 months in a first pregnancy, but longer if (1) there was a history of late onset of menarche (15 years of age), (2) there was a history of amenorrhea after stopping oral contraceptives, or (3) the patient has no desire to become pregnant. If a work-up was decided upon, the patient's prolactin level should be measured.

Comment

There is a growing sentiment that the practice of medicine should be evidence based; however, the evidence is not always readily at hand. Indeed, as this case report illustrates, textbooks often lack detailed answers to patient-specific clinical questions. An in-depth review of the literature is feasible when one is writing for publication but not

when attending to a busy clinical practice. Indeed, the simple question prompted by this patient resulted in a literature search that produced 88 references. Six reprints were studied in depth, and only one study provided some evidence to support the position that this patient was still within the normal range for resumption of menstruation after lactation and did not need a work-up. The obstetric consultant supported this view, although I suspect that the response was somewhat empirical and not grounded in specific evidence from the literature.

Much as one would like clinical decisions to be based on scientific evidence, it is not always feasible. Often clinical decisions in real-life practice are derived from empirical knowledge based on individual experience, inferred from related literature, or provided by consultants who also rely on similar processes but have a more in-depth knowledge in a narrower field of practice.

The teaching setting allows more time to pursue the scientific basis of medical practice. Given the myriad of clinical questions that lack a good scientific basis in medical practice, however, the physician is forced to be selective about the topics chosen for in-depth review and accept the practical need for the art of medicine to guide our thinking processes and management decisions.

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