

Semiology... So Easily Forgettable

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BACKGROUND

Palpation of peripheral pulses is a part of medical semiology for evaluating the presence or absence of peripheral artery disease. This examination is particularly important in cardiology practice, especially in patients with hypertension, to exclude the diagnosis of coarctation of the aorta.

However, this practice is scarcely used by physicians due to the advent of diagnostic imaging techniques, in particular, by young and/or inexperienced doctors who trust blindly in the diagnostic accuracy of the most recent methods.

Therefore, a survey was conducted in patients with hypertension attending the same cardiology clinic. The target of this poll was to evaluate the percentage of physicians who palpate peripheral pulses of the lower extremities in hypertensive patients during their habitual practice.

METHODS

Over the last two years, 196 patients of both genders between 28 to 88 years who had attended the same cardiology clinic were consecutively evaluated by a single operator. The patients had consulted for different reasons. All of them had a history of hypertension and were under drug treatment indicated by other physicians.

A complete medical history was taken. Patients were asked whether the physician had palpated the peripheral pulses of the low extremities. After performing physical examination, pedal, posterior tibial and femoral pulses were palpated bilaterally. Then, patients were interrogated if this type of exam in the lower extremities had been performed. All the patients were fully conscious, had no memory disorders and in most occasions were accompanied by relatives who confirmed their answers.

RESULTS

During medical interrogation, 38 patients acknowledged that peripheral pulses in the low extremities had been examined during previous anamnesis and 26 after physical examination (Table 1)

Then, the patients who reported not having their peripheral pulses examined were asked about the kind of medical care received, the level of specialization of the operator and other related issues which are sum-

marized in Table 2.

In addition, lower extremity arterial Doppler ultrasound was indicated to seven patients in whom peripheral pulses had not been examined and who presented non-specific lower limb pain. Again, peripheral pulses were not examined after the ultrasound test.

DISCUSSION

Health care administrative management has shortened the time dedicated to medical consultation to limits which are almost unacceptable for good medical practice. Doctors sometimes lack enough time to do

Table 1. Study population

	n	%
Patients recognizing that peripheral pulses had been palpated	64	33
Before physical examination	38	19
After physical examination	26	13
Patients not recognizing that peripheral pulses had been palpated	132	67

Table 2. Type of facilities and professionals not examining peripheral pulses

	n	%
Treated at hypertension centers in the city of Buenos Aires	12	9
Treated at large cardiology centers in the city of Buenos Aires	17	13
Treated by cardiologists in their private offices in the city of Buenos Aires	22	17
Treated by cardiologists from the Great Buenos Aires area	19	14
Treated by primary care physicians in the city of Buenos Aires	35	27
Treated by primary care physicians from the Great Buenos Aires area	27	20

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a complete physical examination and prefer to focus on specific central organs which they consider more important.

In other cases, the young physician who may not be specialized and is still inexperienced, frequently orders complementary tests following the not always well-intentioned recommendations of medical equipment manufacturing agents. Lack of time to perform a complete physical examination is also another cause for ordering complementary techniques to ensure the patient's health.

Assuming that 50% of the examined patients might have been wrong, there is still a significant percentage of patients certifying this flaw in the examination.

In addition, if the patient does not present manifest symptoms and/or signs, it is highly improbable he/she has coarctation of the aorta, as nowadays this condition is accurately diagnosed by neonatologists and pediatricians who indicate surgery or endovascular treatment.

This modest and elementary-based survey, which I think is unlikely to be severely criticized, shows an increasing trend towards underestimating physical examination of the cardiovascular system. It can be assumed that the patients did not remember previous examinations due to the elapsed time, or perhaps because emotional issues related with the white coat prevented them from paying attention to the physician's task during the examination. Another possibility is that patients may not have been totally honest in answering the questions in order not to embarrass the operator, or simply did not keep the exam in mind.

Considering that compared with the frequency patients recall blood pressure measurements, which they generally demand, 50% of the patients (an excessive number) do not remember peripheral pulse palpation for different reasons, this percentage is still greater than that detected by this survey.

It is difficult to understand that examination of peripheral pulses has not been performed in hypertension and cardiology centers considered leaders in the management of cardiovascular diseases. And this is more remarkable, as cardiologists point out the importance of the ankle brachial index, for which they recommend Doppler ultrasound to improve sensitivity, when palpation of peripheral pulses is easier.

It is also surprising that a Doppler ultrasound of the lower extremities is required without previous physical examination, knowing full well that the presence peripheral pulses surely rules out intermittent claudication.

The aim of this modest description is to draw the attention about how frequently physicians avoid per-

forming the traditional physical examination. The characteristics of physicians or medical centers examining peripheral pulses have not been described so as not to extend this description.

Postgraduate university education

The pathophysiological mechanisms most recently published in medical journals are frequently discussed in the theoretical classes given at postgraduate courses in Cardiology or Hypertension by different local universities. Most of these reports are currently not completely accepted or have limited usefulness for daily medical practice. Sometimes they compete with each other to demonstrate their level of knowledge or updating and forget their function as trainers of qualified health care professionals rather than of specialists in basic investigation.

In other occasions, large medical trials evaluating a therapy or the effectiveness of an antihypertensive drug give rise to controversies supporting or denying the usefulness of the agent. In this case, the pharmaceutical industry supporting these products has special interest in these matters, so much so that the objective values of the trials are never presented. Instead, the studies focus on the relative differences between two therapies or on the different doses that should be administered to achieve effectiveness, leading in many cases to treatment of signs and symptoms rather than diseases.

CONCLUSIONS

Two conclusions arise from this modest survey:

1. The most experienced physicians, leading clinical investigation teams, should recall their subordinate colleagues the principles of traditional semiology and avoid reducing the quality of good medical practice imposed by health care administrative management.
2. The institutions providing postgraduate education in cardiology and hypertension should not take for granted that their students know and strictly use medical semiology during their practice. It would be more useful to limit the discussion about the last finding in nanobiology for which there are not yet definite conclusions, lacks usefulness in daily practice and there is no treatment, and focus on training specialists with better competence in diagnosis and treatment with currently available therapies.

Conflicts of interest

None declared