

### Is it possible to align the teaching of radiology in undergraduate medicine with that employed in graduate and continuing medical education courses?

Dear Editor,

The correlation among clinical, radiology, and pathology is considered one of the most important elements of the medical science teaching/learning process, being widely used in the training of specialists not only in radiology and diagnostic imaging but also in several other fields of medicine; it also represents a basic tool for the construction of strategies aimed at continuing medical education, using the principles of interdisciplinarity and transdisciplinarity in education<sup>(1)</sup>.

The ongoing changes in Brazilian medical education have created opportunities to redirect and rescale radiology instruction in undergraduate education, as well as in clinical and surgical specialization courses, with an impact on the training and continuing education of radiologists. This process has been influenced by studies demonstrating that shifting the focus of the teaching/learning process from the teacher to the students, together with the use of active learning methodologies and teaching techniques that favor the development of reasoning for problem-solving at all stages of medical education, has advantages for the restructuring of curricula and learning objectives, as well as for changing the mentality of instructors<sup>(1–7)</sup>.

In undergraduate education, breaking down disciplinary walls allows the contents to be integrated, thus promoting the mobilization of knowledge and facilitating the understanding of physiopathology and radiological signs in each clinical context; however, most Brazilian medical schools still use the disciplinary structure, misaligned in relation to the integrative and multidimensional pedagogical strategies practiced by postgraduate programs where in-service teaching bridges the gap between theory and practice in health care provision, education, and management<sup>(1,2)</sup>.

Although the correlation among clinical, radiology and pathology plays a central role in the teaching of diagnostic imaging at all stages of medical education, other relevant elements should be included in undergraduate and graduate education. Among those elements, the appropriate choice of complementary tests has become a critical point of medical training, because the poor use of diagnostic methods has a strong negative

impact on patient care and places a burden on the health care system, whether public or private. It is important to develop an advantageous teaching strategy as a useful tool to counteract those inadequacies<sup>(1,2,4,6)</sup>.

Therefore, it is possible to align the teaching of radiology to undergraduate medical students with that used in graduate and continuing medical education courses, anchoring the three stages in the correlation among clinical, radiology, and pathology. However, in the undergraduate stage, it is fundamental to adopt integrated curricula, regardless of the methodologies employed. It is also essential that questions regarding the rational use of diagnostic tools, including the appropriate way of requesting examinations as well as how to understand the text of the radiology report, should be continually examined, because progressive technological changes imply the adoption of new linguistic terms and procedures, which require periodic updating.

#### REFERENCES

1. Silva AF. Estratégia para a inserção da radiologia no ensino de graduação em medicina com uso de metodologias ativas [dissertação]. Belém, PA: Universidade do Estado do Pará; 2017.
2. Chojniak R, Carneiro DP, Moterani GSP, et al. Mapping the different methods adopted for diagnostic imaging instruction at medical schools in Brazil. *Radiol Bras.* 2017;50:32–7.
3. Heptonstall NB, Ali T, Mankad K. Integrating radiology and anatomy teaching in medical education in the UK—the evidence, current trends, and future scope. *Acad Radiol.* 2016;23:521–6.
4. Telang A. Problem-based learning in health professions education: an overview. *Arch Med Health Sci.* 2014;2:243–6.
5. Ghasemizad A. Learning strategies and academic success in traditional and nontraditional higher education students. *Int J Educ Psychol Res.* 2015;1:7–9.
6. Salmon M, Williams D, Rhee K. Refocusing medical education reform: beyond the how. *Acad Med.* 2015;90:136–8.
7. Souza PA, Andrade AM, Ramos FA, et al. Morphofunctional lab as a learning scenario of apprenticeship in Universidade do Planalto Catarinense (UNIPLAC) medical course. *Creative Education.* 2014;5:329–33.

#### Alexandre Ferreira da Silva<sup>1,a</sup>

1. Famaz - Faculdade Metropolitana da Amazônia, Belém, PA, Brazil.

Correspondence: Dr. Alexandre Ferreira da Silva. Ecotomo - Radiologia. Rua Bernal do Couto, 93, Umarizal. Belém, PA, Brazil, 66055-080. E-mail: alexandreecotomo@oi.com.br.

a. <https://orcid.org/0000-0002-9311-3906>.

<http://dx.doi.org/10.1590/0100-3984.2017.0094>



### Systemic lupus erythematosus with diffuse splenic calcifications: a rare combination

Dear Editor,

We report a case of 46-year-old white female with a history of systemic lupus erythematosus (SLE), diagnosed 19 years prior, who had previously been hospitalized for lupus myocarditis and class IV lupus nephritis. She was currently under treatment with hydroxychloroquine and prednisone. She reported sporadic arthralgia, with relief after analgesic use. She reported no history of infectious diseases. Transthoracic echocardiography revealed normal systolic and diastolic function, with mild aortic, tricuspid, mitral, and pulmonary valve regurgitation. Laboratory tests showed positivity for anti-double stranded DNA antibody and anti-single stranded DNA antibody, with a decreased CH50 (7 U/mL; reference range: 23.0–46.0 U/mL), C3 (47 mg/L; reference range:

90–180 mg/L), and C4 (< 6 mg/L; reference range: 10–40 mg/L). Urinalysis showed normal urinary creatinine (624 mg/24 h; reference range: 0.6–1.6 g/24 h) and elevated urinary protein (232 mg/24 h; reference range: < 150 mg/24 h). During the follow-up of the patient, an abdominal ultrasound was requested, and, during the examination, the spleen could not be visualized, although no other abnormalities. To rule out SLE-related systemic abnormalities, whole-body computed tomography was performed. The examination showed decreased spleen size, accompanied by small, diffuse, predominantly subcapsular and peripheral, nodular calcifications, some of which were confluent, with relative sparing of the central regions (Figure 1).

SLE is a chronic multisystem autoimmune disease, in which a variety of organs and tissues are damaged by pathogenic auto-antibodies and immune complexes<sup>(1)</sup>. Abdominal involvement of SLE can occur in virtually any organ within the abdominal