INSIGHTS FROM BRAZILIAN MEDICAL JOURNALS

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SUMMARY
This brand-new series of articles aims at delivering to national and international readers some of the cutting-edge contributions from the Brazilian medical literature. Recently papers published in the main Brazilian medical journals are carefully selected and analyzed by skilled medical editors. In addition we asked editors to choose keywords to be highlighted in order to claim for reader’s attention. Articles are organized by area of interest to facilitate reading. To get the most of the limited available editorial space we did not include the names of the authors of the related articles in the text itself but a complete reference guide is provided at the end of the article. The result carries the most important messages from the original paper accompanied by a personal interpretation. Directed to the busy medical doctor we hope that this initiative may help in the successful translation of knowledge from scientific evidence to clinical practice.


CARDIOVASCULAR SYSTEM

Coronary artery disease
Interesting data were reported regarding an issue frequently debated between dentists and cardiologists: safety of local anesthesia with vasoconstrictors during dental procedures. The results reassure that this procedure can be safely utilized in patients with coronary artery disease and ventricular arrhythmia.1,2 Two well designed cost-effectiveness studies suggested that for the Brazilian Health system, prehospital thrombolysis represents an advantage over conventional treatment and that the use of sirolimus eluted Stents is more suitable for patients with high risk of restenosis.3,4 Two elegant experimental studies showed, in the first one, that ventricular remodeling after induced myocardial infarction in young rats is more favorable than in adults and, in the second one, that hypertonic saline solution administration for patients with decompensated heart failure is safe and improve clinical and renal parameters.5,6 Finally, for the joy of cardiovascular surgeons, a four-year prospective study suggests that coronary bypass surgery is associated with a better quality of life when compared to angioplasty and medical treatment.7

CARDIOVASCULAR SURGERY 1
Complications after coronary artery bypass surgery is associated to increased case fatality and elevation of cost and length of hospital stay. Two articles suggest that prophylactic temporary atrial pacing is effective in preventing atrial fibrillation after coronary artery bypass surgery (CABG) without extracorporeal circulation.8,9 In addition, the importance of noninvasive ventilation after extubation and in the setting of acute respiratory failure complicating CABG and preoperative physiotherapy were highlighted.10-12 Regarding detection of perioperative myocardial infarction, data suggested that cardiovascular magnetic resonance imaging is more sensitive than myocardial scintigraphy for the identification of small areas of myocardial necrosis.13 A prevalence of 20.9% was reported for supravalvular pulmonary stenosis associated to Jatene operation for Transposition of Great Arteries. Moreover, the authors described that once identified and in the need of surgical treatment, it can be performed at low mortality levels.14

METHODS IN CARDIOLOGY
Left ventricular mass and hypertrophy was addressed in two studies proposing a new score and reviewing existing criteria.15,16 Findings obtained at necropsy from individuals with cardiac amyloidosis were compared to clinical, EKG and Echocardiographic parameters registered during life.17 The analysis of heart rate variability in menopausal women suggested that aerobic training can improve autonomic cardiac function.18 Apical aneurysm, a landmark of chronic Chagas heart disease, was evaluated by scintigraphy and possible clinical implications were suggested in a study with 13 patients.19

HYPERTENSION AND RISK FACTORS
Resistance exercise training have shown to decrease blood pressure and could help in the management of elderly hypertensive women.20 Also in women it was observed that a

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decrease of at least 5% in weight is associated with improved inflammatory status and decreased insulin resistance, regardless of changes in adiponectin and TNF-alpha levels. Normotensive and previously non-trained young women observed reductions in blood pressure after a 16 week weight training program. Vegetarianism has been advocated as a supplementary treatment for the prevention of cardiovascular disease. In a comparison study, the authors found that vegetarians have a lower cardiovascular risk estimated by the Framingham score index. Children with AIDS acquired by vertical transmission is becoming more frequently diagnosed as life expectancy have improved for adults. In a study with 93 of these children, cardiac involvement was described and left ventricular dysfunction was the most common abnormality on echocardiogram.

CARDIOVASCULAR SURGERY 2

Technical aspects of cardiovascular surgery received special attention. Encouraging results were reported regarding preparation of saphenous vein by no touch technique, combination of transmyocardial laser revascularization and cell therapy for refractory angina, and mitral valve replacement with chordae tendineae preservation in end-stage dilated cardiomyopathy. Conversely, studies addressing the perioperative period and pharmacological protection of ischemic myocardium also disclosed promising results with glucose-insulin-potassium solution (GYK), diltiazem (neuroprotection in rabbits with occluded aorta), and the addition of procaine in the cardioplegic crystalloid solution.

Surgery

Non-cardiac surgery

Non-cardiac surgery in the elderly population is increasing. Evaluation of the inherent risks and determination of the predictors of complications is mandatory to guarantee a favorable risk/benefit ratio. A sample of subjects aging 71 years in average (14% older that 80 years old) was evaluated in order to investigate the prognostic factors for mortality related to non-cardiac surgery. The mortality rate was 8.2%, and the complication rate was 15.8%. Multiple logistic regression showed that a history of coronary heart disease (OR: 3.75; p=0.02) and/or valvular heart disease was associated to reduction in the need of a second intervention due to recurring adenomas or adenomas that were incompletely resected.

Urology

Urinary incontinence is major problem involving social compromise and several medical conditions. Multidisciplinary approaches as well as new effective therapies are very welcome. In a randomized, controlled trial it was demonstrated that exercises directed to pelvic floor muscles, electrical stimulation, and vaginal cones are effective treatments for women with urodynamic stress urinary incontinence.

The issue of ability and experience of surgeons was evaluated in sixty-seven patients submitted to transurethral resection of the prostate. The authors found that a surgeon’s experience was associated to reduction in the need of a second intervention due to recurrent adenomas or adenomas that were incompletely resected.

Pathology

An investigation for clinico-pathological discrepancies in a retrospective analysis of 288 autopsy records disclosed overall major and minor discrepancy rates of 16.3% and 28.1%, respectively. The more frequent missed diagnoses were pulmonary embolism, pneumonia, and myocardial infarction. Aging 60 or older and female gender were risk factors for diagnostic disagreement.

Infection

A cohort of 406 HIV infected patients was evaluated in order to identify the difficulties related to the use of antiretroviral therapy. Adverse reactions to medication and scheduling were the main reports. The HIV-seropositive status disclosure, anxiety, absence of psychotherapy, higher CD4+ cell count (> 200/ mm3) and high (> 4) adverse reaction count, CDC clinical category A, pill burden (> 7 pills), use of other medications, and low understanding of medical orientation were independently associated with the degree of difficulty.

Pediatrics

The influence of regional cultural factors on the Clinical indicators of child development was addressed in the capitals of nine Brazilian States. The authors found that habits and culture did not affect the results and that the Clinical Indicators of Risks in Infant Development proved to be a robust method despite the specificities of each region. In an interesting study directed to investigate the role of tepid sponging to promote fever control in children the authors observed that tepid sponging plus dipyrone was better than dipyrone alone during the first 1.5 minutes, but the latter presented better fever control over the two-hour period. Tepid sponging caused mild discomfort, crying and irritability for most of the children.

Hematology

The crosses evaluation method (+/++/+ +++++) is frequently used in clinical practice as reference criteria for several signs and symptoms. In an elegant study investigators compare the accuracy of two different methods for the determination of hemoglobin levels in patients with anemia: four-level crosses and a simple prediction of hemoglobin level. Comparing to real
hemoglobin levels, the authors found that hemoglobin prediction was more accurate than evaluation by the four-level method.\(^{41}\) In another study, by reducing the median length of hospital stay without increasing morbidity and mortality a promising new hemotropoietic stem cell transplantation program allowed an increment in the number of transplantations.\(^{44}\)

**Obstetrics**

In a study with thirty-two pregnant women labor analgesia preformed by two different methods was compared. Examining maternal-fetal aspects, authors observed that both a low-dose of ropivacaine and a lower dose of this drug associated to clonidine relieved maternal pain during obstetric labor. In addition, it was suggested that newborns of mothers who received only ropivacaine had some advantages in neurological variables.\(^{45}\)

**Exercise and sport sciences**

To evaluate cardiorespiratory fitness behavior a group of 963 adolescents were studied during the performance of the PACER (Progressive Aerobic Cardiovascular Endurance Run) test. Clinical, social and economical data were obtained from a participants. The authors found that 2/3 of males and 1/3 of females did not reach the healthy fitness criterion. In addition it was observed an association between low socioeconomical status and the lowest levels of cardiorespiratory fitness.\(^{46}\) On the other hand, evaluating body adiposity of 511 children from high socioeconomic status it was observed that a high percentage of them present important health risk factors at early ages.\(^{47}\) Similarly, in another sample of adolescents, body overweight figured out as the only variable related to increased arterial blood pressure, irrespective of gender and age.\(^{48}\)

Creatine supplementation one of the most frequently used interventions done by athletes was evaluated in two studies. I an animal study, despite altering the lean body mass, the supplementation did not affect the performance of the animals.\(^{49}\) In a group of eighteen male college students submitted to strength training, it was observed that training was able to increase the resultant of dynamic maximum strength (RDMS) independently of creatine ingestion.\(^{50}\)

Leisure time physical activity in postpartum period (LPA) was evaluated in four-hundred women. The authors found that the highest score of LPA was associated to having black or mixed skin colors, being older and higher parity.\(^{51}\) In a study with nine hundred and sixty women aging above 60, the association between level of physical activity and cardiorespiratory capacity was evaluated. The authors found that the superior tercile of total physical activity level was the one which presented the lowest decrease in the cardiorespiratory capacity and the non-practitioner of physical exercises sub-group presented the highest decrease, suggesting a positive influence of moderate physical exercises practice over the cardiorespiratory capacity.\(^{52}\)

**Orthopedics**

Multiple knee ligament injuries are not a homogeneous group of conditions that may deserve different evaluations and treatments. Evaluating more than on hundred patients with chronic multiple ligament injuries, authors found an association between falls, practice of sports and injury both to anterior cruciate and other ligament other than posterior. On the other hand, injury both to the posterior and other ligament, including or not the anterior cruciate, are related to traffic accidents and direct trauma caused by an object on the knee.\(^{53}\)

To identify and analyze the profile of patients that were victims of car traffic violence eighty-four individuals were studied. Most of them were motorcyclists, 83% were male, youngsters, who had graduated in high school, with a monthly income equivalent to two minimum wages, and only 36.5% had a formal job. Most fractures were on the lower limbs (54%).\(^{54}\) In a prospective study, 25 individuals were randomized to receive treatment with cryotherapy, exercise or short waves for knee osteoarthritis. All groups showed similar improvement in functional quality.\(^{55}\)

Falls are very important health problems in the elderly. Two recent studies reported interesting findings in this issue. The data from 205 hospitalized patients \(\geq\) 60 years old, with fractures resulting from falls were compared to 205 patients in the same age group and without fractures. The authors found that the use of medication was associated to fractures resulting from falls.\(^{56}\) In another sample, the authors found association between falls and being older, weaker, and unable to watch television.\(^{57}\)

Two studies investigated imaging aspects and genetic and environmental factors involved on intervertebral disc degeneration.\(^{60-61}\) Quite different epidemiological and clinical data about trauma injuries among the elderly and musculoskeletal injuries in elite female basketball athletes were reported in two studies.\(^{62-63}\) Two experimental studies in animal models present promising results with low-power laser therapy for peripheral nerves’ regeneration and ligamentotaxis sequencing in vertebral canal decompression.\(^{60-63}\)

**Mensagens dos periódicos de medicina brasileiros**

**Resumo**

Esta nova série de artigos tem por objetivo levar aos leitores nacionais e internacionais algumas das mais importantes contribuições provenientes da literatura médica brasileira recente. Os artigos originais mais relevantes são selecionados por experientes editores a quem solicitamos que escolham palavras-chaves para que sejam destacadas para chamar a atenção do leitor. Para facilitar a leitura, os artigos são organizados por área de interesse. Para aproveitar ao máximo o limitado espaço editorial não são incluídos os nomes dos autores dos artigos. Entretanto, a referência completa é oferecida ao final do artigo. O resultado final traz o que há de melhor do artigo, seguido de uma sintética interpretação pessoal. Endereçado ao médico ocupado, esperamos que esta iniciativa possa contribuir para o sucesso da translação do conhecimento da evidência científica para a prática clínica. [Rev Assoc Med Bras 2009, 55(6): 760 - 4]

**Unitermos:** Ciência. Brasil. Medicina. Pesquisa.

**References**


19.尽量保持自然阅读。


