Colorectal Cancer: Portugal and the World

Cancro Colo-rectal: Portugal e o Mundo

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Colorectal cancer (CRC) is the third most common cancer worldwide. In 2008, the incidence of CRC was estimated at 1 234 000 new cases per year (both sexes) and is much higher in more developed countries (30.1/100 000) than in less developed countries (5.9/100 000)[1] (Table 1). This incidence is generally higher in men and the risk of the disease increases with age, with the majority of cases being diagnosed in patients aged fifty years or more.[2] In Europe, CRC represents 12.9% of all newly diagnosed cancers and is responsible for 12.2% of all cancer deaths. In Portugal, the number of deaths from CRC increased by 3% per year between 2000 and 2005 and the overall survival rates at 1, 3 and 5 years are estimated at 73%, 55% and 46%, respectively.[3]

The increase in the number of CRC cases in the last thirty years is strongly linked to changes in lifestyle and exposure to carcinogens. The gradual abandonment of the Mediterranean diet, increased caloric intake, increased intake of animal fats and red meats, increased obesity and sedentary lifestyle, as well as tobacco consumption are strong contributors to the increase in CRC incidence. For example, it is estimated that 54% of CRC cases seen in the UK in 2010 were attributable to these factors.[4]

It is generally agreed that, given the significant negative effect of CRC on people's quality of life and the associated high mortality rates, it is essential to develop primary and secondary strategies for the prevention of CRC. With regard to the primary prevention strategies, it is vitally important to raise awareness and educate the general population with a view to modifying dietary risk factors and adopting healthy habits, in particular in developed countries. With regard to the secondary prevention strategies, the detection and reduction of premalignant adenomatous lesions and the early detection of cancer in a curable stage should be the primary goals. Unlike Portugal, various countries in Europe and North America, as well as Japan, have already organized the implementation of such strategies, with a view to benefit the general population and to reduce the extremely high oncology-related healthcare costs. The procedures may vary, depending on the type of screening (sporadic or mass screening), but among some yet to be validated methods, fecal occult blood testing, flexible sigmoidoscopy and colonoscopy are those that may be used because they offer proven (although different) results. The choice of method to be used will depend on a variety of factors, such as the available human and financial resources, the particular circumstances of individual countries and the design of the required screening. Colonoscopy is undoubtedly the most sensitive and specific method; it has the advantage of combining, within a single stage, diagnostic and therapeutic procedures through the removal of adenomatous lesions that are visualized during the examination, thus preventing their possible natural progression into cancer. This was demonstrated in the USA[5] where a significant reduction in the age-adjusted incidence rate of CRC per 100 000 men and women was observed. Colonoscopy was used as the primary procedure in the sporadic screening of average-risk population aged 50 years or more. The diagnosis rate for cancer, advanced adenoma, and overall adenomas was lower than 1%, approximately 10% and 25–30%, respectively. Moreover, colonoscopy was used as a secondary procedure following a positive fecal occult blood test. The National Polyp Study that was conducted in the USA demonstrated a 75% decrease in CRC risk in subjects who underwent a colonoscopy. Thus, in the USA there are currently strong clinical and financial incentives in favor of colonoscopy as a screening method. The great majority of primary care physicians are of the opinion that colonoscopy is the screening method of choice and that it reduces concerns regarding legal issues associated with the inferior outcomes of the alternative methods. Furthermore, the quality of colonoscopy has been gradually improving, which translates into an increased detection rate of adenomas and a reduction in right colon cancer risk.[6]

In view of the high morbidity and mortality rates, it seems incomprehensible that the individual States of the European Community pursue such different policies on a matter as sensitive as CRC and its prevention. It is even more incom-

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Table 1 - Estimated Age Standardized rate of incidence and mortality for colorectal cancer, in 2008 in a population of 100 000 persons, for both sexes, in different regions of the world. In addition is given the ratio of the mortality to incidence rates.

Region of the World	Incidence	Mortality	Ratio of Mortality/ Incidence
Northern America	30.1	9.1	30.2%
Europe	28.1	12.8	45%
Eastern Asia	18.0	8.0	44%
Western Pacific Asia	17.9	7.9	44%
Latin America and Caribbean	11.4	6.6	57%
South East Asia	6.9	4.8	69%
Africa	5.9	4.8	78%

From IARC GLOBOCAN database in 2008.

prehensible that individual countries maintain their own arbitrary policy, instead of a unified policy, when the European Commission itself has already issued a technical opinion on the subject.[7]

In the particular case of Portugal some interesting initiatives have been undertaken; however, these have been developed on a local and/or regional level, have been difficult to sustain for various reasons and are rarely audited by the proper authorities. In addition, the various governments have been alienated, which is reprehensible in every aspect. Nevertheless, with the effort of some parties those initiatives have achieved important benefits for the health of the target populations. Some problems and limitations related to this kind of initiatives have been continuously identified and in some cases disclosed.[8] It is imperative to proceed, but it is essential to develop, generalize, implement, audit and finally correct (if necessary) according to the results and the conclusions that are drawn. The need for this endeavor has long since been expressed, in particular by some Scientific Associations such as the Portuguese Gastroenterological Society and the Portuguese Digestive Endoscopy Society, which represent gastroenterologists who are an indispensable part of this undertaking. It is essential to implement a concerted plan regarding CRC that includes primary prevention, in which the various health professionals should contribute to raising awareness and educating the population regarding the adoption of healthy lifestyles and in which regular physical exercise and the prevention of obesity and excess weight gain play an important role. Simultaneously, the benefits of the Mediterranean diet and its adoption should be promoted, in particular the intake of fruit, cereals and olive oil. Youth should be considered as a key target group, not only because of the importance of developing a lifelong healthy lifestyle, but also because young people take information to their homes and pass it on to the adults. For this purpose, visits to schools should be ongoing and information should be provided in a way that is deemed to have the most local impact and to be the most effective. Secondary prevention measures, which are an added value to the target population irrespective of the methods that are used, should be effectively implemented and coordinated; local/regional pilot projects should be acceptable, although limited in time and regularly audited. From here, the procedures can be gradually generalized, although the existing local asymmetries may allow for different modes of action, which will depend on particular circumstances. Lastly, the approach to CRC treatment requires the commitment and the coordination of multidisciplinary teams which include a variety of specialties and which should be primarily focused on differentiation in order to improve the final outcomes. The financial constraints, which are currently an argument against the development of many projects, need not to affect future (very) positive undertakings in this area. In fact, as those who have implemented such programs have observed,[9,10] a well-thought-out CRC prevention and treatment plan not only represents cost savings but also, and most importantly, serves the best interest of patients and the general population, which is the final goal of health professionals and health policies.

In conclusion, given the substantial burden of the disease on the population, the issue of prevention, diagnosis and treatment of colorectal cancer in Portugal needs to be urgently and effectively addressed via a comprehensive and integrated approach that effectively reduces the high morbidity and mortality indicators, as other countries have been seeking to do. This may require a concerted intervention by the European Union that should include the remaining European countries.

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