The Role of Family Physicians in Prevention of Malignant Diseases

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The Role of Family Physicians in Prevention of Malignant Diseases

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Prevention of Carcinoma

Burden of Malignant Diseases

• The first leading cause of death in Macau.

• Cancer has a significant impact on individuals, their families, and society as a whole

• National Institutes of Health (NIH) estimated that the direct and indirect overall cost of cancer in 2008 was $228 billion when total health expenditures and loss of productivity from morbidity and premature death were included.

• Macau?
The best treatment of malignant diseases is its prevention.

Human Cancers Are Preventable

- 50-70% of all human cancers are preventable
- The major avoidable risk factors can be broadly separated into four areas:
  - tobacco
  - infectious agents
  - chemical (including hormonal) agents
  - diets

Cancer Prevention Strategies

Three different major levels:
- primary
- secondary
- tertiary

Primary Prevention 1

- To identify genetic, biological, and environmental factors that are etiologies or pathogeneses subsequently exerting their effects on tumor developments
- Risk reduction:
  1. changes in diet
  2. increased physical activity
  3. tobacco cessation
  4. decreased exposure to the sun
  5. reduced intake of alcohol

Primary Prevention 2

- The increasing identification of constitutive genetic alterations that predispose individuals to cancer
- They have been used for primary interventions such as prophylactic surgery.
Primary Prevention 3

<table>
<thead>
<tr>
<th>Cancer with an Infectious Etiology</th>
<th>Agent</th>
<th>Mode of Transmission</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatocellular carcinoma</td>
<td>Hepatitis virus</td>
<td>Maternal, oral</td>
<td>Vaccine</td>
</tr>
<tr>
<td>Gastric</td>
<td>Helicobacter pylori</td>
<td>Oral</td>
<td>Antibiotics</td>
</tr>
<tr>
<td>Cervix</td>
<td>Papillomavirus</td>
<td>Sexual</td>
<td>Vaccine</td>
</tr>
</tbody>
</table>

Secondary Prevention 1

- Used for individuals with evidences of preneoplasia,
- Clinically identifiable progression without frank malignancy

Secondary Prevention 2

<table>
<thead>
<tr>
<th>Organ Site</th>
<th>Precursor</th>
<th>Method of Detection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oesophagus</td>
<td>leukoplakia</td>
<td>Visual(^2)</td>
</tr>
<tr>
<td>Skin</td>
<td>Actinic keratoses/moles</td>
<td>Visual(^2)</td>
</tr>
<tr>
<td>Oesophagus</td>
<td>Barrett’s oesophagitis</td>
<td>Endoscopy</td>
</tr>
<tr>
<td>Colon</td>
<td>Adenoma (polyp)</td>
<td>Sigmoidoscopy, colonoscopy</td>
</tr>
<tr>
<td>Breast</td>
<td>LCIS, DCIS(^2)</td>
<td>Mammography, ultrasound, MRI</td>
</tr>
<tr>
<td>Cervix</td>
<td>Intraepithelial neoplasia</td>
<td>Colposcopy</td>
</tr>
</tbody>
</table>

- \(^1\) Cytology and/or biopsy is required in almost all cases before definitive therapy can be initiated.
- \(^2\) In situ optical spectroscopic methods are being developed to detect early preneoplastic changes, including enhancing the signals with fluorescent molecules.
- \(^3\) Intrauterine cervical carcinoma in situ.

Tertiary Prevention

- Provided to individuals who clearly have a malignant disease
- The goal is to prevent them from developing further complications

Many believe that tertiary prevention is outside the scope of traditional prevention and should be a part of disease management

Core Value of Family Medicine

- Holistic, personal approach to the health of people and their families
- Continuity of care over time and integrating the knowledge of medical, psychological and social aspects
The Role of Family Physicians in Prevention of Carcinoma

Role of Family Physicians in Prevention of Carcinoma 1
- Opportunities for practising preventive medicine in the field of oncologic medicine
  - Primary prevention – change life style, diet, smoking cessation, vaccination supply, etc.
  - Secondary prevention – Many organ sites have preneoplastic counterparts that should be amenable to early intervention, e.g., pap smear, mammography, colorectal screening test etc.

Role of Family Physicians in Prevention of Carcinoma 2
- Using family physicians’ approach to the people and their families
  - Find out the “populations at risk” – genetic and environmental

Role of Family Physician in Prevention of Carcinoma 3
- Cancer has a significant impact on individuals, their families, and society as a whole.
  - Family physicians are much more effective if they can deploy all the resources of the community for the benefits of their patients and their families
  - Family physicians should provide continuity of care in the views of medical, psychosocial and social aspects.

Thank You for Your Attention