中文題目：消化科系業務中的低價值醫療服務

英文題目：Low-value healthcare in gastroenterological practice

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Background

In modern medicine, the increasing of budgetin healthcare is an inevitable problem. In Taiwan, healthcare expenditures accounted for 6~7% of gross domestic product (GDP) annually. And it's expected to keep growing for aging population.

Expandingthenational financial resource may be difficult. Trying to reduce the cost is more practical. Some interventions deliver only marginalbenefit, in the form of overuse, misuse or waste.

Value-based medicine (VBM) aims to provide a solution to cost inflation. The term "value" of a health interventionstands for patient-perceivedoutcome incorporating with the resources expended,which is similar to"efficiency". The balancing between cost reduction and outcomes achieving is always crucial.

There are some associations working on reducing low value practices. NationalInstitute for Health and Care Excellence (NICE) starts to publish "do not do"recommendations since 2005."Choosing wisely", an initiative of the American Board of Internal Medicine(ABIM) Foundation, seeks to avoid wasteful or unnecessary medical tests, treatments and procedures.Reducing the use oflow-value healthcare practiceshas attracted extensive attention internationally.

Aims

Some items of gastroenterologicalpractice were considered to be effective treatment theoretically and were performed as routinefor decades before. However, after the accumulation of evidence, they were proved to be marginal beneficial, wasteful, or even harmful. We aimed to point out theselow-value items by tracing its evolutionary process and evidence.

Methods

We performed literature searching from databases such as Cochrane, ABIM "Choosing Wisely", NICE "do not do" recommendations, the Canadian Agency for Drugs and Technologies in Health health technology assessments, or peer-reviewed medical literature. We selected 3 items as examples according to our clinical

experience and the usage frequency. We reviewed the literatures to analyze the history of these items.

Results

The following 3 low-value items were discussedseparately:

1. Nasogastric tube insertion and irrigation in patients with upper gastrointestinal bleeding

   Early Evidence:

   In 2004, a randomized control trial by Aljebreen et al. on Gastrointestinal Endoscopy, composed of 520 patients undergoing NG lavage for suspected upper GI bleeding revealed higher high-risk lesions detection rate: Bloody (45%) vs Clear or Bilious (15%) (odds ratio 4.82: 95% CI[2.3~10.1]). Then nasogastric tube insertion was routinely performed in UGIB patients.

   Late Evidence:

   In 2011, a randomized observational trial using propensity-matched method by Huang ES. et al on Gastrointestinal Endoscopy published. It enrolled 386 cases visited ED of West Los Angeles Veterans Affairs Medical Center with UGIB between January 1996 and December 2005. The results revealed that there were no differences in 30-day mortality or hospital stay in patients with or without nasogastric tube irrigation.

   Summary:

   Due to no improvement in mortality, hospital stay, surgery rate, or blood transfusion amount, NG lavage in the management of patients with acute upper GI bleeding is considered to be antiquated.

2. Repeated colonoscopy and stool occult blood test in short intervals

   Early Evidence:

   In 1993, a randomized control trial by Winawer et al. on New England Journal of Medicine, enrolled 1418 patients with adenoma detected during colonoscopy examination. The patients were randomized in to two groups with either 2 examinations or 1 examination in 3 years. Higher adenoma detection rate was noted in the 2 examinations group (41.7% vs 32.0%). However, there was no difference in detection rates of adenomas with advanced pathologic features, which was considered to be an intermediate biologic end point of future colorectal cancer. The rate was 3.3% in each group.

   Summary:

   After high-quality colonoscopy with findings of less than 3 polyps, and the max size of the polyps < 1cm, repeat colonoscopy within 3 years or repeat stool O.B.

test within 2 years are considered unnecessary.

3. Early endoscopic retrograde cholangiopancreatography (ERCP) in acute biliary pancreatitis

Early Evidence:

In 1978, Classen et al published a case series on Endoscopy. Complete removal of bile duct stones result in the recovery from pancreatitis in 17 patients. Then lots of RCTs showed conflict results in decades.

Late Evidence:

In 2012, a systemic review by Tse F et al was published on Cochrane Database of Systematic Review. The result showed no difference in both mortality and morbidity, comparing to conservative treatment group. However, in subgroup analysis, ERCP can be beneficial to patient with acute pancreatitis combining cholangitis, revealed better mortality (RR=0.20, 95% CI 0.06 to 0.68; P = 0.010) and morbidity (RR=0.45, 95% CI 0.20 to 0.99; P = 0.05)

Summary:

Early ERCP is not necessary in acute biliary pancreatitis without coexisting cholangitis or biliary obstruction

Conclusions

The ultimate goals of VBM are improved healthcare quality and effective and efficient utilization of healthcare resources.Application of VBM in daily practices may help us reducing costs and maintain quality of care simultaneously.

VBM can only be achieved by the foundations of evidence-based medicine (EBM). We should use up-to-dated and high-level evidence as support to avoid low-value practices.