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Testamentary Capacity

Testamentary capacity refers to the ability of a person to execute (make) a Will. A male Will maker is formally referred to as a “testator” whilst his female counterpart is referred to as a “testatrix”. The assessment of a person’s testamentary capacity is becoming increasingly more important because the average age of the population is rising. Many people have no children, and rival parties partial to the inheritance are more prone to resolve their disputes in the court room.

In law, testamentary capacity is presumed. That is to say, a person making a Will is normally assumed to possess such capacity. This is the same as a person signing an agreement to buy a flat, or when you sign on your credit card to make a purchase. The court takes a liberal view in its interpretation, and no other evidence is offered, the court will pronounce (accept) it presuming the testator to be mentally competent.1 However, when a challenge is brought up by another party, the proponent of the Will will need to submit evidence to support the testamentary capacity of the testator. “Those propounding the Will must satisfy the court that the testator was of sound disposition. When the whole of the evidence is before the court, the decision must be against the validity of the Will unless it is affirmatively established that the deceased was of sound mind when he executed it. Where grave suspicion of incapacity arises in the case of those propounding the Will, they must dispel that suspicion by proving testamentary capacity”.1

Another basic concept involved is testamentary freedom, that is, the prerogative of the testator to decide on how he wishes to distribute his wealth. English law “leaves everything to the unfettered discretion of the testator (on the assumption that) the instincts, affections and common sentiments of mankind may safely be trusted to secure, on the whole a better disposition of the property of the dead”.2 This is unlike the case in some continental countries, when landed properties can only be passed to male heirs.

The assessment of testamentary capacity is very important for a potential testator because of the following reasons: (1) Wills are often challenged in Court (2) It is necessary to prevent challenge and litigation (3) To give positive evidence and dispel uncertainties of the testator’s wish in Court (4) To protect any possible weakness which may be used to challenge the Will.

In English law, there is the famous Golden Rule, which states: “In the case of an aged testator or a testator who has suffered a serious illness, there is one golden rule which should always be observed, however straightforward matters may appear, and however difficult or tactless it may be to suggest that precautions be taken: the making of a Will by such a testator ought to be witnessed or approved by a (competent) medical practitioner who satisfied himself of the capacity and understanding of the testator, and records and preserves his examination and finding.”3

Who is a competent medical practitioner? In Hong Kong any registered medical doctor in current practice is allowed to do the assessment. However, since such an assessment is a preparation for contest to be brought up in court, one must foresee that the Judge will take into consideration the training of the doctor, his specialty, his experience and the number of cases he has performed and appeared as an expert witness in court. Hence, it is usually a specialist psychiatrist with special interest and experience in this area who is the most suitable doctor to perform such an assessment. However, whether the testator has the requisite legal capacity to make the contested Will is a legal issue, the doctor can only give an opinion about the testator’s mental capacity, the court has the final authority to decide on testamentary capacity.4

Certain principles have been used to determine capacity:

(1) By outcome, ie, whether the person can make the judgement that will result in the most favourable outcome. One famous case is that of a mental patient with an infected diabetic foot; the doctor decided that the patient must have an amputation, or he would die. However, the court ruled that the patient had the capacity to refuse the operation, and the patient survived. Thus, determination by outcome is not a generally accepted principle.

(2) By status, such as elderly persons, mentally handicapped persons, detained mental patients or people with certain medical or psychiatric diagnosis. Again this is not found to be a sound principle. One exception is that of minors who are legally presumed to be incapable and do not need to submit evidence to support the testamentary capacity of the testator.

Note: Where appropriate in the article, “testator” also refers to “testatrix” and “he” also refers to “she”.

Key words: Testamentary capacity (立遺囑的能力), Will (遺囑)

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not possess testamentary capacity.

(3) **By function**, depending on the testators’ ability to understand, to possess knowledge, to make a rational decision and to communicate choices. This is the accepted principle used for the determination of capacity.

There is one erroneous concept that needs to be dispelled; in a survey of doctors in the USA, 72% of doctors noted that a diagnosis of dementia automatically means a testator lacks capacity, 71% said psychosis and 66% depression.5

This lies in the bracket of assessment by status, which, as was previously highlighted, did not withstand the scrutiny of the courts.

There are two types of assessment performed by the doctor:

1. **Contemporaneous assessment**, where the testator is available for examination by the doctor before the Will is executed.
2. **Retrospective assessment**, where the testator cannot be examined. Usually the testator has died and his Will is challenged in Court. At times it may be that the testator has fallen into a coma, or he is not available for examination.

Certain abilities are required of the testator for him to possess capacity. He must:6

- Understand the information relevant to the decision he is to make
- Use the information rationally eg, risk/benefit comparison
- Appreciate the situation and its consequences ie, that he is being asked to make a Will to dispose of some or all of his property after death
- Be able to communicate choices.

The UK Mental Capacity Act 2005 stated, with regard to testamentary capacity, a person is unable to make a decision for himself if he is unable to:

- Understand the information relevant to the decision
- Retain the information
- Use or weigh that information as part of the process of making the decision
- Communicate his decision (whether by talking, using sign language or any other means).

The classical court case used for over a hundred years to test whether a person has testamentary capacity is the case of Banks and Goodfellow. John Banks suffered from delusions of persecution and had been confined as a lunatic in 1841. He made a Will disposing of his 15 houses in 1863, and he died two years later. In 1870 the Court ruled that his delusions had no influence on his Will, which was upheld. The judgement of Lord Chief Justice Cockburn (Figure 1) stated: “It is essential that … a testator:

- Shall understand the nature of the act and its effects
- Shall understand the extent of the property of which he is disposing
- Shall be able to comprehend and appreciate claims to which he ought to give effect (and with a view to the latter object)
- No disorder of mind shall poison his affections, pervert his sense of right and prevent the exercise of his natural faculties — that no insane delusion shall influence his Will in disposing of the property and bring about a disposal of it which, if the mind had been sound, would not have been made.”

To put this in modern language, the testator must:

- Understand the nature of the act and its consequences
- Understand the full extent of his assets affected by his Will
- Know the identity of the executor and each of the beneficiaries under his Will as well as the share to be taken by each of such beneficiaries
- Understand and appreciate the relation and claims of those who might expect to benefit from the Will – both those included and excluded
- Have no disorder of mind or insane delusion that influences the disposition of the assets.

However, recent cases have put additional requirements on top of the Banks and Goodfellow judgement.

1. An 89-year-old man executed a Will a week after his wife died, leaving his assets to his daughters. His sons made an application to the court claiming that the testator did not have testamentary capacity. The Judge ruled that the patient was devastated by the bereavement at the time and did not have the power to make the decision.7
2. A testator with multiple sclerosis who could not speak disinherited his daughter and left his farm to the farm manager for no apparent good reason. The Will was declared invalid by the court. The Judge ruled that “The testator needs to arrive at a rational, fair and just Will”.8

There are certain important features about testamentary capacity.

(1) **Time specific**

If a testator executed a Will while he was of sound disposing mind (intact testamentary capacity), the Will is valid even though he did not have the capacity before the act or may lose the capacity later. Consider a patient in a coma, when he regains consciousness, he may be able to make a will, even though his mental capacity may later deteriorate due to other complicating illnesses.

(2) **Task specific**

Depending on the complexity of the issues, a patient may have sound capacity for one task and not possess it for another task. So the patient may be able to testify that he wished to give the only property he owned to his only child, but he may not be able to give...
direction about a multi-million dollar business with complicated company structure situated in many countries to be distributed among his many wives and children and other relatives.

(3) Situation specific
The testator may be able to understand certain simple situations but not be able to understand more complex situations. The more complicated the situation, the higher the level of cognition required for the testator to be competent (Figure 2). The testator may know that he owns a flat, but if his assets are involved in a complicated litigation, he may not be able to appreciate the true extent of his bounty.

(4) The rule of Parker vs Felgate (1883) is also frequently invoked:
• A patient gave instructions for a Will. Before he could execute (sign) it, he became confused or comatose.
• Later on the patient became conscious enough to sign the Will.
• The court will uphold the Will to be valid. (Example: Perrins vs Holland 2010)
In the case, the Will must have been properly and fully drawn up in the first instance. There are no new additions or alterations.

Preparation for doing an assessment:
• Make sure that the patient agrees to be assessed
• Agree on the parties to be given the report
• Obtain information on family background from family members and lawyers
• Ascertain the extent of the estate
• Check who the potential beneficiaries are
• You may ask to see a copy of the Will proposed to be made by the patient to satisfy yourself that its complexity is such that in your professional view the patient can fully understand and give his free and independent consent to the making of the relevant Will
• Check previous Wills and their provisions
• Review medical history from relatives and medical records
• Check relevant legal documents.

Before the assessment:
• Give optimal treatment — for example the patient may be given blood transfusion, intense therapy for infection, nutritional support or physiotherapy to maximize his capacity
• Temporarily discontinue sedating medicine, if applicable
• Choose suitable period, time and environment when the patient can perform well. The patient’s condition may fluctuate from day to day, or may be mentally more alert at a particular time of the day
• Perform interview in a satisfactory environment (quiet, good lighting, privacy, free from disturbance, in the absence of people with significant interest or influence).

The assessment:
• A full medical history is taken with particular attention to cerebrovascular accidents, dementia or other disorders of the brain
• Psychiatric history, past and present, should be recorded
• General physical status, physical examination and medical diagnosis
• Psychiatric examination and diagnosis, paying particular attention to recent and current symptoms like mood disorder, confusion, hallucination or delusion
• Cognitive tests including Mini-Mental State Examination, Clock Drawing or other tests are to be included
• Specific confirmation of conscious level
• Banks v Goodfellow test — the four arms of the Banks v Goodfellow test must be applied in turn and the doctor should be satisfied that the testator has passed all parts of the test
• Verbatim records of answers are most informative. They are often produced in court in support of your report or opinion
• Contemporaneous notes are strong evidence of proof in court because they are taken at the time
• Previous Wills, reasons for change — it would greatly help to dispel any doubt if the testator can say clearly why his disposition has changed from a previous Will
• Who was included, who was excluded, reasons for disposal – as in the case of Key vs Key, the Court will need to be certain not only that the bounty was distributed in certain ways, but will need to be satisfied that the testator arrived at a rational, fair, and just Will
• Video recording in selected cases — in cases where the situation is complicated, or the risk of a challenge can be expected, or where large sums of money are involved, video recording is recommended for better documentation.

The report
The following is a prototype, but doctors may have their own preferences. However, the points below should generally be included:
• State your personal identification including name, practice address and contact telephone numbers
• State your claim to expertise — your qualifications, specialty, training and experience with regard to mental state examination, cognitive testing and assessment of testamentary capacity
• State your instructions — the party that made the request and what you are expected to do
• List documents to which you made reference, including medical reports, previous Wills, other legal documents. Acknowledge duties and obligations to the court. For example:
• I understand that my primary duty is

Figure 2. Relationship between cognition/emotional stability and situation complexity.

<table>
<thead>
<tr>
<th>Level of cognition or emotional stability</th>
<th>Situation complexity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capable</td>
<td>High</td>
</tr>
<tr>
<td>Uncomplicated</td>
<td>Low</td>
</tr>
<tr>
<td>Incapable</td>
<td>Conflict or complex</td>
</tr>
</tbody>
</table>

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to the Court rather than the party that engaged me
• I have endeavoured in my report and in my opinion to be accurate and to cover all relevant issues
• I will notify those instructing me immediately and confirm in writing if, for any reason, my report requires correction or clarification or qualification
• I understand that my report, subject to any corrections made before swearing as to its correctness, will form evidence to be given by me under oath and that I may be cross examined on my report by a cross examiner
• I am likely to be subject of adverse criticism by the Judge if the court concludes that I have not taken reasonable care in the preparation of this report and the opinions I have formed;
• I have not entered into any arrangement where the amount or payment of my fees is any way dependent upon the outcome of this case.

The contents include:
• Family background (parents, siblings)
• Personal background (including upbringing, education level, marriage and children)
• Medical and psychiatric history
• Current medical and psychiatric illness and disability
• Report according to finding at assessment
• Findings in regard to each limb of Banks v Goodfellow test
• Summary of finding and your opinion
• Statement of truth:
  - Example: “I declare that this report has been prepared in accordance with information given to me. It is true and correct to the best of my knowledge, understanding and belief. The opinions I have expressed represent my true and complete professional opinions on the matters to which they refer.”

Timing of assessment:
• In usual cases, when patients are not very ill and condition not fluctuating, the Will can be executed up to a week from the capacity assessment. Each case should be judged based on the individual circumstances.
• In more debilitated patients, or patients with fluctuation conditions, the Will should be executed immediately after capacity assessment.

Attestation of Wills
• Doctors may be asked to testify a Will. In this case, there is an assumption that the doctor is satisfied with the capacity of the testator. So, do not testify a Will unless you have assessed the testamentary capacity properly.

Retrospective assessment of testamentary capacity
• Generally, a retrospective assessment is made to challenge a Will. In such a case the patient has often died or has deteriorated significantly and become incapacitated since the Will was made. He may refuse to be examined or there may be obstruction from some family members or care-givers. A retrospective challenge is usually based on claims of lack of capacity, duress or undue influence.

A retrospective assessment has to make reference to:
• Hospital and nursing home notes
• Legal records and attendance notes
• Informants, eg, family members, care-givers
• Any other information, eg, patient’s diary or letters
• Activity records (travel, employment)

All evidence gathered are collated to form an assessment and opinion on the patient’s capacity at the material time. Undue influence refers to:
• One person taking advantage of the position of power over another person
• Free will to bargain is not possible
• Any act of persuasion that overcomes the free will and judgement of another, including exhortations, importuning, insinuations, flattery, trickery, and deception.

Certain factors are usually present:
• susceptibility of the testator
• opportunity
• inclination and planning
• an unnatural or suspicious transaction

Warnings of undue influence:
• A confidential relationship existed between the testator and the influencer that created an opportunity for the latter to control the testamentary act
• The influencer used that relationship to secure a change in the distribution of the testator’s estate
• There were unnatural provisions in the Will
• The change of distribution did not reveal the true wishes of the testator
• The testator was vulnerable to being influenced, either because of a neurologic or mental disorder, or because of specific emotional circumstances
• The beneficiary actively participated in or initiated the procurement of the Will
• There was undue benefit to the beneficiary (Figure 3).

Conclusion:
• Wills are very often subject to challenges
• Care in drawing up Wills with proper assessment of testamentary capacity is very important to avoid potential litigations
• The assessment should be meticulous and follow established standards
• Careful documentation must be done to avoid future disputes
• Performed by a competent doctor with appropriate training and experience.
BRINTELLIX TAKES CARE OF MORE THAN MOOD

Brinellix is efficacious in treating all the symptoms of depression (assessed by MADRS) across a range of patients.1-4

Brinellix also significantly improves cognitive performance in depressed patients and reduces the cognitive symptoms of depression2,5 that affect most patients.6

- These include: concentration difficulties, poor attention, problems with memory and difficulty planning6-8

Brinellix is a new antidepressant with multimodal activity.4,9

Brinellix is well tolerated1,4,10-12

Patients (18-65 yrs) can start, stay and stop on Brinellix 10 mg once daily4

References:
5. McNulty R. et al. Randomized, double-blind, placebo-controlled study of the efficacy of vortioxetine on cognitive function in adult patients with major depressive disorder (MDD). Poster presented at the 51st Annual Meeting of the American College of Neuropsychopharmacology (ACNP), December 8-12, 2013, Hollywood, Florida, USA.
Today, in 2015, as a global community of medical practitioners in various specialties, it can be claimed that we have developed considerable expertise in our respective fields of clinical practice that has resulted in improved patient care. However, despite many advances in scientific and technological areas, there remains a gap in our practice as physicians or surgeons. While we have eagerly focused on developing expertise in our specific areas of clinical practice, we have neglected clinical nutrition to the extent that it can potentially be regarded as a “weak link” in our clinical practice.

Therefore, it is imperative to increase our awareness of this, in order to address the pressing issues of catabolic stress in certain patient populations. There are some widely accepted concepts in clinical nutrition therapy:

1. Patients who are critically ill, or scheduled for elective major abdominal surgery, should be assessed for pre-existing malnutrition, or for nutrition risk – the risk for nutrition-related complications.
2. Patients who have been identified to be at risk should receive a full nutritional assessment, so that a nutrition therapy plan can be implemented to optimize the identified risk.
3. This plan should prioritize enteral nutrition (EN) as the preferred route, initiated within 24–48 hours, in order to achieve both non-nutritional benefits (gut immunity, modulation of the immune response, and metabolic homeostasis) as well as nutritional benefits. However, in a considerable number of these patients, some degree of gut dysfunction can be found, related to the severity of the critical illness. This can result in poor tolerance to EN, and when calorie and protein targets are not adequately met, the consequent deficit has been shown to be associated with increased morbidity and mortality.
4. In this situation, the calorie-protein targets can be met by implementing timely supplemental parenteral nutrition (SPN) when 60% of the nutritional targets are not met after 72 hours (day 3). This concept of early SPN has been shown to be associated with significant clinical benefits, such as reduction in infectious complications, and shorter time on mechanical ventilator support.
5. The safety and efficacy of early SPN can further be enhanced by supplementation with key nutrients, such as glutamine and fish oil, which have important pharmacologic effects beyond simply providing energy or nitrogen. These effects are associated with a clinically beneficial modulation of the immune and inflammatory responses. Indeed, a number of global observational studies from different centres have shown that energy and protein deficits during the early days of critical illness are associated with increased mortality and morbidity. However, delivery of appropriate amounts of calories and protein has been shown in randomised controlled trials to result in better clinical outcomes, including reduced mortality. In surgical patients, the evidence is more compelling as there is a clear association between malnutrition, the catabolic stress of major surgery, and the outcomes of impaired wound healing, muscle weakness, and compromised immune defence.

Therefore, due to the anticipated catabolic stress, all patients admitted to ICU or scheduled for elective major surgery (particularly gastrointestinal resections for cancer) should be screened and assessed for malnutrition or risk of nutrition-related complications. There are a number of tools available: Nutrition Risk Screen 2002 (NRS) – developed by ESPEN (European Society for Clinical Nutrition and Metabolism) and supported by Level 1 evidence; Malnutrition Universal Screening Tool (MUST) – recommended by the BAPEN (British Association for Parenteral and Enteral Nutrition); Subjective Global Assessment (SGA) which is widely used and validated in the dietetics community, but can take more time to complete; and NUTRIC score, a more recently developed tool specifically designed for ICU patients. Ultimately, the routine implementation of nutrition-risk screening and assessment is more important than the actual choice of tool, and this should be linked to the prescription of a nutrition therapy plan.

When formulating the nutrition therapy plan, energy requirements are best determined by indirect calorimetry (particularly in ICU), but weight-based calculations of 20–25 kcal/kg/day are appropriate for the acute phase of critical illness, and 25–30 kcal/kg/day in surgical patients. Protein requirements are of equal importance, and need to be supplied in the range of 1.0–1.5 gm/kg/day. Lipids are used as an additional energy source at 1.0–1.2 gm/kg/day, allowing a more calorie-dense energy supply and helping to improve glycaemic control by lowering glucose requirements. Vitamins, minerals, and trace elements also need to be considered. Finally, immunomodulation with key nutrients such as glutamine and fish oil can enhance the clinical benefits of nutrition therapy.

Key words: Nutrition therapy (營養療法)
The plus for a healthy recovery

- Nutritionally complete powder
- Mixable in different caloric densities (1.0 to 1.5 kcal/ml) according to individual needs. For patients with moderate to high energy needs, with or at risk of malnutrition.
- Excellent fat composition:
  - well-balanced ratio of n6 : n3 fatty acids (4.3:1)
  - with MUFA (≥ 58% of fat) and PUFA (≥ 30% of fat)
  - low in SFA
- High quality whey protein (60% of protein)
- With prebiotic fibre (inulin)
- Containing all essential vitamins and trace elements
- Applicable as sip or tube feeding
- For supplementary or complete nutrition
- Vanilla flavour

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No. 1 Clinical Nutrition

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The Montreal Definition and Classification of Gastroesophageal Reflux Disease (GERD) defines gastroesophageal reflux disease (GERD) as a condition that develops when the reflux of stomach contents causes troublesome symptoms and/or complications.1 Global statistics estimate GERD prevalence as 18.1–27.8% in North America, 8.8–25.9% in Europe and 2.5–7.8% in East Asia.2 This frequency has been rising since 1995 (p<0.0001), particularly in North America and East Asia,2 and is driven by aging populations and rising obesity rates.3

GERD symptoms, particularly nocturnal ones, disrupt patients’ quality-of-life and contribute to declines in physical functioning, sleep scale scores, work productivity and work attendance.4 To address this, effective and sustained symptom control are the ultimate aim of GERD management.

Proton-pump inhibitors as treatment-of-choice

According to the 2013 American College of Gastroenterologists (ACG) guidelines, an 8-week course of proton-pump inhibitors (PPIs) is the therapy-of-choice for symptom relief and healing of erosive oesophagitis (EO).4 PPIs have demonstrated superior efficacy outcomes and patient satisfaction compared with other GERD medications like histamine receptor antagonists.4-6

The different PPIs provide broadly comparable efficacy outcomes.4 However, traditional delayed-release PPIs do not address existing treatment challenges, as cited by Wittbrodt et al.:7

• Persistent symptoms, particularly nocturnal heartburn, in some patients with EO despite PPI treatment. These patients are often prescribed PPIs twice-daily to achieve better symptom control, which contributes to increased treatment costs and decreased compliance.

• Risk of disease relapse during maintenance treatment in patients who experienced complete healing of EO.

• Decreased treatment adherence during the maintenance phase caused by as-needed use and patients’ difficulty adhering to dosing instructions.

These unmet needs highlight the importance of providing patients with a once-daily PPI that exerts effective 24-hour symptomatic control with a pharmacodynamic profile unaffected by dose timing.

Dexlansoprazole dual delayed release: Extended control and dosing flexibility

This formulation of dexlansoprazole has a dual delayed-release (DDR™) delivery system which produces two distinct drug concentration peaks; the first at 1–2 hours following dose administration.
and the second at 4–5 hours. The dual peak, as depicted in Figure 1, prolongs drug residence time in the body, approximately 12 hours post administration, compared with traditional delayed-release formulations like esomeprazole.

In a Phase I study, the prolonged drug residence of dexlansoprazole resulted in a significantly higher mean intragastric pH over 24 hours following a single dose of dexlansoprazole 60 mg compared with esomeprazole 40 mg (4.3 and 3.7 respectively, p<0.001). The pH difference was particularly distinct during the >12–24 hour period when mean pH values were 4.5 and 3.5, respectively (p<0.001).

To examine the pharmacodynamic profile of dexlansoprazole, a Phase I, four-way crossover trial was designed. Patients were randomized to dexlansoprazole 60 mg once daily for 5 days at one of four different meal times: 30 minutes before breakfast (control arm), lunch, dinner and an evening snack. While absorption was delayed when dexlansoprazole was taken with meals compared with before breakfast, systemic exposure in each arm was bioequivalent, suggesting that dexlansoprazole taken at different meal times provides comparable symptomatic relief.

Another Phase I trial randomized 48 patients to receive placebo on Day 1 and dexlansoprazole on Day 3 either after fasting, 5 minutes before a high-fat breakfast, 30 minutes before or 30 minutes after a high-fat breakfast. The fed regimens (5 minutes before and 30 minutes after) were associated with increases of 12–31% in maximum plasma concentrations and of 9–21% in area-under-the-curve plasma concentration-time curve. Nonetheless, these variations did not result in clinically relevant differences in intragastric pH.

These Phase I findings, in part, informed the 2013 ACG guideline recommendation that dexlansoprazole can be administered regardless of food or timing of food, thereby addressing some of the key issues in therapy adherence.

In terms of EO healing, two double-blind trials (N=4,092) found that dexlansoprazole had equivalent or superior efficacy compared with lansoprazole. Furthermore, a 6-month, randomized, double-blind trial (N=445) confirmed that dexlansoprazole was not only superior to placebo for the maintenance of healed EO and symptomatic relief, but was also more efficacious for the control of heartburn (Figures 2 and 3).

In conclusion, dexlansoprazole’s extended pharmacodynamic effects over 24 hours, dosing flexibility, and efficacy profile support its indication for the control of GERD symptoms and for EO healing.

### Surgical options for GERD

The 2013 ACG guidelines recommend surgical interventions such as laparoscopic fundoplication for patients with GERD and bariatric surgery for obese patients to achieve long-term control of GERD symptoms.

Surgery is indicated for patients who respond to PPI therapy but do not wish to be on long-term medications, those who may be non-adherent, have subjective reflux symptoms and at least one objective criterion confirming reflux syndrome (such as a positive preoperative pH study, laparoscopic evidence of EO or an anatomical defect such as hiatal hernia). It is of note that prior to surgery, patients should undergo preoperative manometry to exclude motility disorders including achalasia.

When performed by an experienced surgeon, surgery is considered as an alternative treatment to long-term medical therapy. In comparison with open surgery, laparoscopic fundoplication allows easier access to the fundus with fewer postoperative complications and reduced postoperative pain. At 3 years follow-up, one study reported that surgery was associated with more heartburn-free days (p=0.0077) and lower global visual analogue scale score (p=0.0093) than medical management. Researchers noted that while...
both treatment modalities are effective, surgery provides better symptom control and quality of life (p=0.0124).\textsuperscript{13}

Complication rates for surgery are low and the most common adverse events are gas-bloat syndrome and postoperative dysphagia, which are associated with surgical technique and experience. While partial and total fundoplication both offer good long-term control of reflux symptoms, partial fundoplication results in less dysphagia and better ability to belch and vomit than total fundoplication up to 10 years post-procedure.\textsuperscript{14,15}

The surgical experience with laparoscopic fundoplication in Hong Kong has comparable efficacy outcomes as reported in the West, although these data have yet to be published.

The performance of laparoscopic fundoplication in Hong Kong remains low compared with the West where patients have greater awareness of GERD, the risk of Barrett’s oesophagus and development of oesophageal carcinoma in long-term. However, this is expected to change as Hong Kong faces a rising incidence of GERD in response to Westernisation of lifestyles and increasing obesity rates within the population.

In conclusion, increasing prevalence and awareness of GERD in Hong Kong will require more effective long-term symptomatic control. Newer treatment options such as dual delayed-release PPIs and fundoplication surgery address unmet needs to reduce the risk of GERD-associated complications.

References
ONE Capsule. TWO Releases. Extended Symptom Control

The PPI with Delayed Release Technology for the management of GERD

Granule 1
- comprises 25% of total dose
- released at pH 5.5 within 2 hours of dosing

Granule 2
- comprises 75% of total dose
- released at pH 6.75 several hours of dosing

Greater 24 hrs acid control than esomeprazole
Can be administered with clopidogrel
Once daily, taken with or without food

For further information, consult full prescribing information


Dexilant abbreviated prescribing information

H. pylori: 30 mg b.i.d. x 14 days (1 hr postprandial); H. pylori eradication and maintenance of eradication. Note: Treatment of heartburn associated with or without GERD. D. E. [New product] 30 mg once daily for 8 to 12 weeks for maintenance. 30 mg once daily. Symptomatic non-anemic GERD 30 mg once daily for 8 weeks. For all patients. Symptomatic non-anemic GERD 30 mg once daily for 4 weeks. 6. [New product] symptom and symptom relief for a maximum of 8 weeks. 7. [New product] use for a maximum of 8 weeks. 8. [New product] intolerance. Note: Treatment of heartburn associated with or without GERD.
**Effective Management of Post-Influenza Pneumonia with a Novel Broad-Spectrum Cephalosporin**

**Key words:**
Cephalosporin (頭孢菌素),
Post-influenza pneumonia (肺炎)

**Introduction**

Influenza has a seasonal epidemic each year with the traditional peak in the winter. Between 1st January and 9th March, 2015, the Hospital Authority reported a total of 10,405 patients with confirmed diagnosis of influenza that required hospitalization. Of the 459 patients admitted to ICU, 351 cases of mortality were reported.1

Pneumonia is a common, life-threatening complication associated with influenza that contributes to a significant proportion of morbidity and mortality. During the Hong Kong influenza A pandemic in 1968, there was a three-fold increase in the incidence of staphylococcal pneumonia in comparison to the previous year which demonstrated a high correlation between influenza and pneumonia.2

Despite the availability of antibacterial medications, the emergence of drug-resistant pneumococcal and staphylococcal isolates has reduced the effectiveness of such treatments. A novel agent against a broad-spectrum of microbes and drug-resistant strains is therefore highly warranted.

In this report, we describe two post-influenza patients with severe community-acquired pneumonia (CAP) treated with ceftaroline fosamil, a fifth-generation cephalosporin that exhibits activity against Gram-positive and Gram-negative bacteria, and resistant strains such as methicillin-resistant *Staphylococcus aureus* (MRSA). Its efficacy against respiratory pathogens has been demonstrated in three phase III trials.3-5

**Case 1 (Dr Chan Ka Wing)**

A 41-year-old man was admitted to the Hong Kong Baptist Hospital with emergence of upper respiratory tract symptoms and progressive shortness of breath after 3 days of cough and fever. He was an ex-smoker who was otherwise in good health. Prior to admission, the patient had not consulted any general practitioners and had received only over-the-counter medications.

Physical examination revealed the patient had a temperature of 39.0 °C, a respiratory rate of >30 breaths per minute and an oxygen saturation level of 90% on room air. Chest X-ray showed consolidation in the lower zone of the right lung. Initial blood tests revealed an elevated total white cell count of 21 × 10^9/L, with neutrophils the predominant cell type, and an elevated C-reactive protein level of 160 μg/mL. A nasopharyngeal aspirate sample obtained from the patient detected a positive polymerase chain reaction for H3 subtype influenza A virus.

The patient was diagnosed with influenza A infection and post-influenza pneumonia as a complication. He was started on an empirical combination antibiotic regimen, which included a 6-day course of intravenous (IV) ceftaroline fosamil 600 mg every 12 hours for the coverage of Gram-positive and Gram-negative pathogens, a 5-day course of oral oseltamivir phosphate 75 mg twice daily for the treatment of influenza, and oral moxifloxacin HCL 400 mg once daily for 7 days for atypical organism coverage. Further investigations revealed a growth of *Haemophilus influenza* in the patient’s sputum culture sensitive to ceftaroline fosamil. Blood culture results were negative.

The patient demonstrated good response to the treatment regimen and made a gradual recovery by the third day of treatment. He became afebrile with improved breathing, and was subsequently discharged 6 days after admission. Upon discharge, he received a prescription for a daily dose of oral moxifloxacin HCL 400 mg for an additional 7 days. The patient had achieved a full recovery at the follow-up visit 7 days after discharge. Chest X-ray results showed complete resolution of the consolidation.

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The only adverse event reported by the patient while receiving antibiotic therapy during hospitalization was mild diarrhoea.

Case 2 (Dr Kwok Yuk Lung)

A 78-year-old woman presented to her general practitioner with an abrupt onset of fever. She had a history of hypercholesterolaemia and hypertension, but was otherwise in good health. A nasopharyngeal aspirate sample obtained from the patient was positive for influenza A. She was given a full course of oseltamivir phosphate and her fever appeared to have subsided despite a persistent and worsening cough.

The patient’s fever recurred during day 5 of the treatment. The chest X-ray was clear (Figure 1A), and the patient was given oral cefuroxime for two days. On day 7, chest radiography revealed pulmonary parenchymal consolidations suggestive of cavity formation (Figure 1B). The patient was admitted to hospital due to her persistent symptoms and radiological deterioration. She was switched to a combination treatment of IV amoxicillin clavulanate and oral clarithromycin. Sputum and blood cultures were negative. During hospitalization, the patient experienced progressive dyspnoea and required high-flow oxygen to treat hypoxaemia.

On day 9, the patient was switched to clarithromycin and IV cefepime hydrochloride and on day 10 was referred from primary to specialist care. Repeated chest X-ray was highly suggestive of cavity formation (Figure 1C) and remarkable radiological deterioration of her left lung. Thoracic CT scan revealed typical necrotizing pneumonia and demonstrated bilateral and multifocal lobar consolidations. This narrowed the microbial spectrum to Streptococcus pneumoniae, Staphylococcus aureus and Gram-negative, extended-spectrum beta-lactamases (ESBL) bacteria, including Escherichia coli and Enterobacteriaceae which were resistant to the administered medications.

The only evidence of Streptococcus pneumoniae bacteria was a positive urine sample; however, co-infections with multiple organisms could not be ruled out. At this time the patient was bedridden and on the verge of requiring intubation.

Considering the patient’s disease state, a 1-week course of IV ceftriaxone fosamil 600 mg and meropenam 500 mg every 12 hours was initiated. The patient made a dramatic improvement with no signs of adverse events; she was able to sit up, eat and talk by the next day and she was able to walk independently 3 days later. Upon completion of a one-week course of the treatment regimen, the patient was discharged. Within a month’s time, the pulmonary cavities appeared to be regressing (Figure 1D), and the patient was able to carry out normal physical activities.

Sputum and blood cultures are commonly implicated in post-influenza pneumonia. In conclusion, the two case studies suggest that ceftriaxone fosamil may serve as a good therapeutic agent because it exerts promising potency in bactericidal activity against a broad range of pathogens commonly implicated in post-influenza pneumonia. In addition, ceftriaxone fosamil has recently been shown to be superior to ceftriaxone, a third-generation cephalosporin, in the treatment of Asian patients with CAP with similar safety profile.\(^6\)\(^,\)\(^7\)

The second case demonstrates a typical situation where conventional antibiotic therapy cannot salvage the patient’s condition and results in clinical failure of the patient. It is vital to ensure coverage of all susceptible organisms during treatment particularly when it is unclear whether the patient was infected by a single pathogen or multiple pathogens. Ceftriaxone fosamil can effectively cover all causative organisms of necrotizing pneumonia. In conclusion, the two case studies showed ceftriaxone fosamil was effective and safe in the empirical treatment of post-influenza pneumonia.

Discussion

Post-influenza pneumonia is a serious condition which causes the immune system to become vulnerable. The disease is often deadly if not treated quickly and properly, even in patients of a younger age group. It is important to be aware of this potential complication in influenza illness.

The most common organisms that cause post-influenza pneumonia are Streptococcus pneumoniae and Staphylococcus aureus. In addition, MRSA can contribute to CAP especially when the immune system and lung function are weakened by influenza virus, consequently leading to secondary bacterial infection. An empiric broad-spectrum of antibacterial coverage is a necessity for the treatment of post-influenza pneumonia.

Sputum and blood cultures are routine microbial investigations used to determine the aetiology of post-influenza pneumonia. Sputum culture often gives negative results due to poor sensitivity and specificity to pathogens, and this is also true for blood culture.\(^6\) Negative results can also be due to administration of antimicrobial medications prior to sputum or blood sample collection. Moreover, test results from sputum culture sample usually take several days; hence the initiation of an empirical pneumonia treatment with good antibiotic coverage is often required prior to susceptibility test results.

These two case studies suggest that ceftriaxone fosamil may serve as a good therapeutic agent because it exerts promising potency in bactericidal activity against a broad range of pathogens commonly implicated in post-influenza pneumonia. Ceftriaxone fosamil has recently been shown to be superior to ceftriaxone, a third-generation cephalosporin, in the treatment of Asian patients with CAP with similar safety profile.\(^6\)\(^,\)\(^7\)

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A complete list of references can be downloaded from www.SOPPHYSICIANSHK.org

Figure 1. Chest X-rays on day 5 (A), day 7 (B), day 10 (C) and day 30 (D)
The reliable empiric treatment for community-acquired pneumonia

**Zinforo**

**ceftaroline fosamil**

- Proven superior efficacy to ceftriaxone
- Bactericidal activity against resistant Gram-positive and common non-ESBL Gram-negative causative pathogens
- Cephalosporin-class tolerability profile

**Abbreviated Prescribing Information**

**Presentation:** Zinforo 500 mg powder for reconstitution for solution for infusion. Indications: Complicated skin and soft tissue infections (cSSSI) and Community-acquired pneumonia (CAP) in adults. **Dosage:** Recommended dose is 600 mg administered every 12 hours by intravenous infusion over 60 minutes in patients aged 18 years or older. Recommended treatment duration for cSSSI is 5 to 14 days and for CAP 5 to 7 days. Dose should be adjusted when creatinine clearance (CrCl) is ≤50 mL/min.

**Contraindications:** Hypersensitivity to the active substance, to any of the excipients, or to cephalosporin class of antibacterials, immediate and severe hypersensitivity (e.g., anaphylactic reaction) to any other type of beta-lactam antibacterial agent e.g., penicillins or carbapenems.

**Precautions:** Patients who have a history of hypersensitivity to cephalosporins, penicillins or other beta-lactam antibacterials, Clostridium difficile-associated diarrhoea, infection by non-susceptible organisms, pre-existing severe disorders, renal impairment potential risk of haematologic anamias in patient groups where there are limitations of the clinical data. Undesirable effects: Gastrointestinal: Nausea, vomiting, diarrhea, abdominal pain, increased transaminases, pyrexia, infusion site reactions (erythema, phlebitis, pain). Local prescribing information is available upon request. APHP ZN 0113.


Please contact BMS/240-7388 or MPA/Safety at AstraZeneca.com for adverse drug reactions (ADR) reporting to ADRH.

**Further information is available on request**

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References:

7. Key & Anor v Key & Ors [2010] EWHC 408 (Ch) (05 March 2010).

Further Reading

References:

1. Hospital Authority. CICO’s Biweekly Update. 13th March 2015.