Contemporary Themes

Shipboard Medicine on Package Cruises

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Summary

Cheap package cruises have become very popular in Great Britain, but the ships used for these cruises are often not suitable for elderly, handicapped, and mentally unfit people. The cruises run to very tight schedules with many strenuous shore excursions, and do not necessarily constitute restful holidays at sea. Many passengers who embark on these cruises are suffering from pre-existing diseases, which may become exacerbated during the voyage. Such patients should be forewarned and should be equipped by their doctors with a covering letter giving full details of their medical condition and its treatment.

Introduction

I have recently completed 12 months' service as a ship's doctor in cruising ships in the Mediterranean area. The practice of shipboard medicine is often regarded by the medical profession and general public alike as a life of leisure, pleasure, sea, and sun, interrupted occasionally by the lucrative treatment of petty illnesses and ending in alcoholic debauchery. This may possibly be true of luxury cruising vessels but it has been my fortune to work only in ships engaged on the cheapest package-tour cruises. In this communication I want to portray the more serious aspects of medical practice on these ships.

Cheap package cruises have, in recent years, become very popular in Great Britain and have brought the pleasure of cruising and the opportunity of visiting Mediterranean countries within the reach of the lower income groups. Every year hundreds of Britons fly out to various ports in the Mediterranean to join ships, usually sailing under foreign flags, in which they cruise for 8 to 21 days, eating and sleeping on board and participating in daily excursions at the various ports of call. These cruises are phenomenally cheap; a 15-day cruise, exclusive of shore excursions but including a return flight from Great Britain, ranges from £60 to £140.

At these cheap rates the operators are content if as many as 80 to 90% of their clients have an enjoyable cruise. Owing to errors in operation or lack of facilities in the ships the remaining 10 to 20% may, indeed, have a most unenjoyable cruise. In all fairness it must be mentioned that in many cases disappointed clients are compensated monetarily by the tour operators where breaches of contract have occurred.

In the past 12 months I have noticed that, on some cruises a further 10 to 20% can be added to the expected number of disappointed clients. This added percentage can be attributed to illness occurring as a result of (a) less than optimum hygienic conditions on the ships, (b) lack of facilities, which

the passengers may or may not have been led by the brochures to expect, and (c) the action of many medical practitioners in Great Britain who, ignorant of the type of ship and nature of the tours, allow patients who may be in precarious states of health to embark on these cruises. It is not the responsibility of the tour operators to determine the fitness of their prospective clients for air or sea travel.

To describe the factors which may affect the health of many passengers embarking on these cheap cruises. I have borrowed the headings "powers," "passages," "passengers," and "umbrella" from a well-known method of teaching obstetrics.

Powers

In most cases pressurized jet aircraft are used to convey the passengers from Great Britain to the port of embarkation. The flight is often long and tiring and is frequently a nerve-racking experience for an unseasoned traveller. I have come across one or two passengers with heart complaints who have suffered discomfort and even needed oxygen on the outward flight. Moreover, previously existing heart conditions sometimes deteriorate during the subsequent cruise and, as air travel is usually the only means by which sick patients can be returned home, extensive arrangements have to be made. These include persuasion and briefing of the aircraft captain and crew and the provision of a doctor (often a fellow passenger) or one of the ship's nurses to accompany the patient.

In their brochures tour operators, intent on promoting the sales of their cruises, tend to depict the ships as floating luxury hotels. It is important for the medical profession to realize that this is not, in fact, the case. Though provided with English-speaking doctors and nurses many of the ships lack facilities important to sickly and elderly passengers, and these deficiencies are not, of course, mentioned in the brochures. I have practised in two ships that are used for cheap package cruises. The following is a list of facilities which were present or absent in these ships and which are worthy of comment from a medical point of view.

AIR CONDITIONING

Both ships were equipped with poorly functioning air-conditioning systems. At the height of summer there was at times no air conditioning at all. The cabins were small and many of them had no portholes, while in the smaller ship maritime law prohibited the opening of the portholes on the lower decks. At times the cabins were stifling. I noticed that these conditions caused exacerbation of bronchial asthma in many cases and discomfort in patients suffering from heart disease. During the summer conditions in the Middle East were such that many passengers chose to sleep in the lounges and on the decks, where the temperature was a little cooler

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than in the cabins. It was also noticeable that passengers suffering from diarrhoea very quickly became dehydrated, and this in itself prolonged the course of their illness.

STAIRCASES AND LIFTS

The cruising brochures often omit to mention the absence of lifts in the ships, and many elderly and infirm passengers express concern at the number of steep flights of stairs they have to negotiate. The smaller ship in which I worked was not equipped with public lavatories on the decks, which meant that passengers had to walk down sometimes as many as three flights of stairs to their cabins and climb them again to return to the lounges—a serious situation for patients under treatment with diuretics for hypertension or heart disease. The larger ship was equipped with a lift, but this was never in operation during the entire summer season. This ship was, however, equipped with public lavatories on the first three decks.

From my own experience I feel that it is necessary that medical practitioners should realize that ships used for these cheap package cruises are, on the whole, not always suitable for elderly or handicapped people and most especially for persons suffering from cardiac or pulmonary disease. In both ships we tried to reserve cabins on the upper decks for passengers with cardiac or pulmonary disease who could not negotiate the stairs, but these cabins were not always available. The cruises were often heavily booked and these cabins were given by me to ill passengers on a first-come, first-served basis. It was often very difficult to decide who was worthy of being given a more suitably situated cabin, and frequently during the course of the cruise a passenger who became ill or whose pre-existing illness deteriorated could not be given such a cabin.

CABIN SERVICE

Communication systems between the cabins and the reception area had been installed in all the cabins but were never in operation. Cabin stewards were not always on duty and a passenger falling ill could have lain in his cabin for many hours before a message could be sent to the reception desk for help.

MEDICAL FACILITIES

The sick bays on both ships were equipped to deal with minor and emergency illnesses only. The medical equipment by no means approached the requirements of the British Board of Trade for ships carrying between 600 and 1,000 persons. The larger ships had two hospital beds in the sick bay for acutely ill patients. The smaller ship, however, had no such facilities, and ill passengers had to occupy the doctor's own bed, which was situated in the surgery itself.

In both ships it was possible to give supportive treatment in an acute case, provided it was not an abdominal emergency requiring urgent surgery, for up to 15 hours, until the ship reached the nearest port where the patient could be disembarked and taken to hospital. Occasionally the ship had to be diverted from the scheduled course for this purpose. Quite frequently the nearest port of call was a small town or island, and I often wondered whether the patient would not have been better off continuing with treatment in the ship than in some of the hospitals I visited. For medicolegal reasons, however, it was impossible to keep seriously ill patients on board. In neither of the ships would it have been possible to deal effectively with more than two seriously ill passengers simultaneously. Neither ship carried an x-ray machine or facilities for surgical procedures more complicated

than the suturing of minor lacerations. It is important to remember that the doctors practising in these ships are registered only in Great Britain and are therefore often unable to obtain additional supplies of certain drugs in foreign ports.

CLEANLINESS AND HYGIENE

Ships used for these package cruises usually sail under foreign flags and are not subject to the stringent regulations of the British Board of Trade. In both ships I encountered serious lack of discipline in matters concerning cleanliness and hygiene among the crew, in the crew quarters, and in the galleys. On almost every cruise I had to deal with outbreaks of gastroenteritis which were probably attributable to lack of hygiene. In the five months of cruising in the larger ship I treated 638 cases of diarrhoea.

In these matters I received minimal co-operation from the ships' crews and from the companies responsible for the running of the ships. Any practical ideas suggested by me for the improvement of the food storage facilities, galleys, or crew quarters were not carried out to my specifications. As I was not registered as a ship's officer my legal powers in these matters were extremely limited.

Passages

It would not be entirely inaccurate to describe these cruises as comparable to army assault courses rather than restful holidays at sea. During the average 15-day cruise there are two days spent at sea. Otherwise one or sometimes two excursions are arranged every day. The longest and most tiring of the excursions may last 12 to 13 hours and include a six-hour coach journey. Passengers are required to book for all the excursions of their choice in advance and may not realize beforehand how strenuous many of them are. One has only to attempt to "do" Israel in one day by travelling in a coach from Haifa to Jerusalem and back to appreciate the stamina required for these excursions.

During the days at sea activities such as "keep fit" classes, deck tennis, and swimming galas are arranged and no age group is barred from participation. I have often observed, apprehensively, purple-faced, overweight sexagenarians "keeping fit" in the morning, eating an enormous lunch, smoking away the afternoon, "doing their thing" in the discotheque at 1 a.m., and ascending the Acropolis the following morning.

Contrary to popular opinion the Mediterranean is not always a tranquil millpond. Force 7 and 8 gales often occur in the winter and early and late summer. Seasickness can at times become serious to a passenger with chronic heart disease or diabetes, while to a patient with gastroenteritis seasickness causes further dehydration and delays recovery. Most of the travel-sickness tablets available are contra-indicated in early pregnancy, but I have seen only two expectant mothers who, on informing their antenatal clinics of their intended cruises, had been warned of this fact. Because of the lack of cabin service mentioned above it became my practice, in the company of the ship's nurses, to make a tour of all the cabins during rough weather and to treat all passengers suffering from seasickness. This was done primarily in the hope of preventing the development of more serious illness, but apart from this the passengers were always grateful.

The extremely hot and humid climatic conditions prevailing in the eastern Mediterranean and Middle East can indeed be deleterious to passengers suffering from cardiac or pulmonary disease. It must be remembered that few package-cruise passengers are acclimatized and this particularly seems to affect asthmatics. These patients are keen not to miss the excursions and often participated in them against my advice.

Passengers

In eight months of travel the smaller ship carried an average of 1,900 passengers and crew every month. The larger ship, in five months of travel on longer cruises, carried on average 1,600 passengers and crew every month. The mean age of the passengers was 52 years, but no fewer than 61% were over 50; 22% were aged 61-70 and 9% were over 70. Practically all came from the United Kingdom or Eire and so far as could be judged many of them were in the middle or lower income groups.

Umbrella

The "umbrella" in these ships is the illnesses which the passengers bring with them and the illnesses which they develop on board during the course of the cruise. The number of passengers interviewed in the ships' surgeries varied from 40 to 80 in the smaller ship during eight-day and 12-day cruises and from 110 to 260 in the larger ship during 15-day cruises. (These figures do not include cases of seasickness.) Most of the passengers visited the surgeries for treatment for gastroenteritis and upper respiratory tract infections. In the larger ship from 10 to 40 crew members visited the surgery during each 15-day cruise, mostly for minor injuries and pharyngeal infections.

In the larger ship I gave a short speech to all the passengers at the beginning of each cruise in which I asked anyone undergoing treatment for any medical or surgical condition—especially heart disease, diabetes, and pregnancy—to report to the ship's surgery, where I recorded the relevant details and gave them advice concerning the excursions. In addition a printed copy of a "doctor's letter" was distributed to each cabin in both the ships at the beginning of each cruise. The letter contained the same request for passengers to report existing medical or surgical conditions and warned them about sunburn, care while walking around the ship, etc. The average number of passengers reporting with pre-existing conditions at the beginning of each cruise is shown in Table I. In the 12 months of practice in the ships I completed 35 cruises and interviewed 574 passengers reporting with pre-existing medical and surgical conditions. Only five of them brought letters from their medical practitioners explaining the condition and the treatment prescribed.

TABLE I—Average Number of Passengers reporting Pre-existing Conditions at the start of Each Cruise

	Average No. Reporting
Heart disease—including coronary artery disease and chronic rheumatic heart disease	5.2
Diabetes mellitus	2.0
Hypertension	1.3
Pregnancy—1st and 2nd trimesters only	1.0
Bronchial Asthma	1.1
Steroid therapy—for various conditions	0.6
Other conditions	5.2
Total	16.4

In Table I "other conditions" included: thyroid disorders, chronic bronchitis and emphysema, peptic ulceration, pancreatitis, ulcerative colitis, renal disease, idiopathic hypercalcaemia with repetitive renal colic (one case), collagen diseases of various types, diabetes insipidus (two cases, which caused concern owing to the heat, lack of air conditioning, and threat of severe dehydration), and cerebrovascular disease.

It can be concluded that most of these passengers were under constant treatment from their medical practitioners. I made a point of asking each passenger who reported whether or not he had informed his doctor of his intended cruise and found that most had indeed done so and had been told that it

would be perfectly in order for him to go. Once on board the ship the cries of dismay most often heard in the surgery were, "I didn't know there was no lift," "We had no idea there would be so many stairs," "We were told that the ship was fully air-conditioned," and "I can't breathe in that hot and stuffy cabin." On occasion I have been asked to supply fat-free, gluten-free, and calcium-free diets. In addition to these all diabetics require low-carbohydrate diets and the occasional passenger suffering from peptic ulcer asks for a meat-free diet with plenty of fresh milk. It must be emphasized that set menus are served in these ships week after week and no provision is made for extraordinary diets of any nature, while milk for drinking is unobtainable.

At least 30% of the passengers interviewed at the beginning of each cruise did not know the name of the drugs with which they were being treated, and in many cases the name of the drug had not been written on the bottle. Five patients had inadvertently left their medicines behind and could only describe their appearance. Most of the drugs available in the surgery had been purchased in foreign countries, and often the tablets and capsules did not bear any resemblance to those used in Great Britain.

During my 35 cruises 12 patients had to be disembarked and sent to hospital. The nature of the emergency in these cases is listed in Table II. One death occurred in the smaller ship and was due to a suspected myocardial infarction.

TABLE II—Emergencies Requiring Disembarkation

	No. of Cases
Myocardial infarction	4
Melaena	1
Haematemesis	1
Perforated peptic ulcer	2
Severe pneumonia	1
Hypercalcaemia with severe renal colic	1
Cerebrovascular accident	1
Attempted suicide with aspiration of vomitus	1

An important matter which must be borne in mind before a decision is made to disembark a passenger is whether or not he is covered by the health and accident insurance policy which every passenger automatically purchases with his travel fare. Passengers over the age of 75 or who become ill as a result of pre-existing medical conditions are not covered by this policy. Medical and hospital treatment in Europe and the Middle East on a private basis is extremely expensive, and the cost of an air fare back to Great Britain after recovery must be added to the medical expenses incurred.

It is worth mentioning one or two points about immunization for travellers going on package cruises. Since the doctors practising on these ships are registered only in Great Britain they are unable to issue valid immunization certificates during the cruise. Many passengers bring vaccines with them and ask for booster doses to be given. Giving the injections is no problem, but the certificates cannot be officially stamped and are occasionally not accepted by the port health medical officers.

Febrile reactions to various immunization procedures, especially smallpox vaccination and cholera inoculations, are common on board. It would be as well for medical practitioners to advise patients who announce their intention of embarking on a cruise to have all their vaccinations and inoculations done a good few weeks before the holiday. In this way many patients will be spared the inconvenience of having to spend one or two days of their holiday in bed. It would be helpful, too, if regular official circulars were sent to all doctors and travel agents informing them of the current immunization requirements of the various countries in Europe, the Middle East, and North Africa. After the 1970 cholera epidemics in the Middle East the tour operators in England had difficulty in finding out which countries insisted on full cholera immunization, and many of the passengers

arrived on board with one or no signatures on their certificates.

On arrival in one port the port medical officer announced that unless everyone on the ship had two signatures on his certificate no one would be allowed off the ship. He demanded to inspect all the certificates. The cruises are run on a very tight schedule and this operation would have taken at least two hours. The chief purser came to the rescue by suggesting glibly to the port doctor that it would be quicker to take any five passports from the rack and to inspect the enclosed immunization certificates. He assured him that he and the ships' doctor had inspected all the certificates and that they were all in order. A significant glance from the purser silenced me and, with bated breath, we watched the port doctor select five certificates—all of which bore two signatures. At the expense of my medical integrity all the passengers disembarked in time to complete their excursion ashore.

Conclusions

Twelve months' experience has shown me that medical practice in a ship is in many ways different from that on land. Shipboard medicine is very compact and its dramatic qualities are intensified. In the small, overcrowded, and in-

adequately-equipped cruising vessels described here the incidence of illness is relatively high, for reasons which I have indicated. The passengers are out of their normal environment—often for the first time in their lives—and are easily frightened. Any illness, no matter how minor, is interpreted as a threat to their holiday, with the possibility of their being sent home or, much worse, being admitted to hospital in a strange country. This is quite understandable, of course, but it causes some patients to delay reporting early symptoms, which often prolongs the course of their illness. This attitude affects some passengers in the opposite way in that they become over-excited and demand immediate attention, even with second opinions, before a proper assessment of the condition can be made.

All this often makes it very difficult to reach a decision which will be in the best interests not only of the patient but also of his fellow passengers. On a tight-scheduled cruise a diversion of the ship for a medical emergency can spoil the holiday for as many as 600 people. The difficulty may be unnecessarily intensified if passengers with pre-existing illnesses are unable to provide help in the form of a covering letter from their medical practitioner at home.

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Scientific Basis of Clinical Practice

Vitamin B₁₂ and Folate Metabolism

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The two groups of substances which have been termed vitamin B₁₂ and folate have in common their action as coenzymes in DNA synthesis and hence their use as therapeutic agents in the treatment of megaloblastic anaemia. Chemically they are unrelated and have entirely different forms of metabolism.

Vitamin B₁₂

CHEMISTRY

Vitamin B₁₂ was isolated in 1948 as a haemopoietic factor of liver extract.^{1 2} The molecular structure consists of a nucleotide, 5,6-dimethylbenzimidazole linked at right angles to a four pyrrole ring, similar to a porphyrin with a cobalt atom attached—a corrin group (Fig. 1).^{3 4} A number of similar compounds, termed cobalamins, have been found in nature, the difference between them being the ligand, or transfer of electrons, attached to the cobalt atom.

Cobalamin with a CN ligand (cyanocobalamin) was the first isolated. The other cobalamins include hydroxocobalamin (OH ligand), methylcobalamin (CH₃ ligand), and 5'-deoxyadenosyl cobalamin. They are all interconvertible. Cyanocobalamin

readily changes to hydroxocobalamin on exposure to light, and this is reversible in the presence of cyanide. All cobalamins are

FIG. 1—Molecular structure of vitamin B₁₂ (from *The Megaloblastic Anaemias*, by I. Chanarin.⁶ Reproduced by permission).