Dear Editor,

Since July 1999, the Community Geriatrics Assessment Service, NTS has started the community geriatric care project in 19 private aged homes in the region covering roughly 70% of the total residence living in private aged homes in the area. The characteristic of our model is a strong nursing support through the community nurses. There is designated community nurses in every aged home recruited in the project who is able to visit the aged home daily if required. Doctor’s clinic is arranged on a biweekly basis in most of the aged homes, but for ad hoc cases medical officer could arrange early visit within 48 hours upon receiving the referral. We hope that with better medical and nursing support we could manage more patients in the community who otherwise would require in-patient service.

One of the common problems for admissions of elders from aged home is dehydration, majority of them being complicated by infection\(^1,2,3\). Subcutaneous rehydration has been reported to be highly effective in restoring hydration in mildly dehydrated elderly\(^4,5\) and reduce the acute hospital utilization in extended care or nursing home settings\(^6,7\). Introducing subcutaneous rehydration therefore is one of the interventions we try to promote in aged homes. We follow the guidelines published by the Hypodermoclysis Working Group on the technical aspects and fluid prescriptions\(^8\). All our community nurses have undergone a short training course on subcutaneous rehydration. Our

### Table 1: Patient characteristics, fluid prescription and outcome

<table>
<thead>
<tr>
<th>Patient</th>
<th>Sex</th>
<th>Age</th>
<th>Functional status</th>
<th>Medical diagnosis</th>
<th>Acute problem</th>
<th>Fluid prescription</th>
<th>Fluid delivered</th>
<th>Complications</th>
<th>Reason for discontinue</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M</td>
<td>84</td>
<td>Bed-ridden</td>
<td>Advanced COPD with Type I respiratory failure, stroke</td>
<td>Poor oral intake and dehydration related to residue effect of COPD exacerbation, just discharged from hospital</td>
<td>0.9%NaCl 500ml/day for 2 days</td>
<td>1L over 2 days</td>
<td>Nil</td>
<td>Completed fluid regime</td>
<td>Intake improved, chest condition stabilized with bronchodilators</td>
</tr>
<tr>
<td>2</td>
<td>F</td>
<td>74</td>
<td>Chair bound</td>
<td>Alzheimer’s disease, DM, neurogenic bladder on indwelling urinary catheter</td>
<td>Fever and poor intake, because of catheter related urinary tract infection</td>
<td>1/2:1/2 solution 2L/day for 3 days</td>
<td>5L over 3 days</td>
<td>Reset cannula on day 3 due to cannula leakage</td>
<td>Completed fluid regime</td>
<td>Adequate rehydrated, infection controlled by antibiotics, intake improved</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>97</td>
<td>Chair bound</td>
<td>Atrial fibrillation, CHF, dementia, bilateral osteoarthritis of knee</td>
<td>Over-diuresis by diuretic treatment resulted in prerenal azotemia</td>
<td>0.9%NaCl 500ml over 8 hours</td>
<td>500ml over 8 hours</td>
<td>Nil</td>
<td>Completed fluid regime</td>
<td>Hydration improved</td>
</tr>
<tr>
<td>4</td>
<td>M</td>
<td>87</td>
<td>Bed ridden</td>
<td>Metastatic CA hypopharynx, bilateral lower limb contracture</td>
<td>Poor feeding with early dehydration, suspected infection</td>
<td>1/2:1/2 solution 1L/day for 2 days</td>
<td>2L over 2 days</td>
<td>Nil</td>
<td>Completed fluid regime</td>
<td>Intake improved, a course of antibiotics given for suspected infection</td>
</tr>
<tr>
<td>5</td>
<td>F</td>
<td>93</td>
<td>Bed ridden</td>
<td>Stroke, multi-infarct dementia, COPD, recurrent UTI</td>
<td>Suspected aspiration pneumonia, early dehydration</td>
<td>0.9%NaCl 500ml/d for 3 days</td>
<td>800ml over 2 days</td>
<td>Cannula out, not reset because of satisfactory oral intake</td>
<td>Cannula out, infection not well controlled with antibiotics, patient admitted to hospital 3 days later</td>
<td></td>
</tr>
</tbody>
</table>
target patients would be those experience episodic illness who, because of inadequate oral fluid replenishment or excessive fluid loss, are having mild dehydration or at high risk of dehydration. Between July - December 1999, we have performed five patients on subcutaneous rehydration in four aged homes. We reported our preliminary experiences.

All of our five patients were severely disabled and dehydrated because of different reasons (Table 1). Three of them were repeated hospitalized because of infection and feeding problems. In the five episodes involved, four of them (except patient 3) would require admission to hospital right away if hydration could not be assured in the aged home. All of the five patients were pick up during the doctor’s clinic as ad hoc cases. The procedures were performed by the community nurses. The aged home staffs were instructed on how to monitor the fluid administration, and the relatives of the patients were informed of the intervention. Daily visits by community nurses were arranged to monitor the clinical progress during the period. The baseline characteristics and outcome of the fluid replacement were tabulated as in Table 1. In our limited experience cited above, patient 5 got uncontrolled sepsis despite adequate rehydration and antibiotic therapy. She was finally admitted and improved after a course of potent intravenous antibiotics.

We did not face strong resistance from the aged home staffs. From the feedback we received, their concerns were mostly related to the possible accidents related to the setup rather than their extra-work to monitor the infusion site or to chart the amount of fluid therapy. They are particularly worried by the butterfly needle secured under the skin, which many misbelieve could puncture the viscera and induce serious injuries. How to deal with possible complications like erythema, pain etc are their other concerns. After explanation and demonstration, most staffs are convinced that they are capable to take care the fluid therapy. All four aged homes admitted that they felt comfortable to handle subcutaneous rehydration in the future if required. Another important factor not to be neglected is the relative of the patients. They actually came to see the doctor and stayed until the procedure was finished, just as the patients were to have a major operation. Relatives are very influential in the aged homes and their support is extremely important for the geriatric community care project to succeed. In the future we probably should involve the relatives more in the patient care plan, although they are not the direct carers of the patient.

We regard it as a good start for us to explore this yet unconquered land. We also welcome comments and sharing from our colleagues working in other districts. Community geriatric care in private aged home is still a very new element in the short history of geriatric practice in Hong Kong. We are keeps learning from trial and error, from our own faults, lots of challenges, and full of excitement.

References:


B Sheng, MRCP(UK)
Medical Officer
C B Law, FRCP(Glasg), FHKAM(Med)
Consultant, Department of Medicine and Geriatrics, Princess Margaret Hospital, Hong Kong

Correspondence to: Dr B Sheng
Email: shengbun@alumni.cuhk.edu.hk