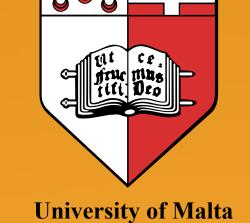
Perception of Use of Liquid Capsules

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INTRODUCTION

Liquid-filled capsules are classified into two, based on the physical properties of the shell and thus, can be hard or soft¹. In the past, if a liquid or a semi-solid drug form was needed, soft gelatin capsules were used to encapsulate these poorly water soluble drugs². Nowadays, hard liquid capsules are used to overcome this process.

AIMS

To compare hard liquid capsules with other oral solid dosage forms in terms of different properties related to physical aspects and effect such as efficiency, speed of action, quality and modernity.

To evaluate the perception of patients, pharmacists and physicians on hard liquid capsules.

To compare the local price of hard liquid capsules with that of other oral solid dosage forms.

METHOD

- Three on-line questionnaires were created, one for patients, one for pharmacists and one for physicians, in order to get their perception on hard liquid capsules.
 These questionnaires were validated.
- The questionnaires were sent out to participants over the age of 18 years, through social media and electronic mail.
- A total of 212 patients, 154 pharmacists and 33 physicians filled in the questionnaires.
- Cardiosteroil® (containing garlic and co-enzyme Q10) was the hard liquid capsule chosen to be compared with other products to determine pricing differences.
- Price comparison was done by visiting six pharmacies
 across Malta in order to find other oral solid dosage forms
 containing the same ingredients.

RESULTS

Patients and physicians ranked hard liquid capsules as the best for the following properties; efficiency, gentleness on the stomach, fast action, high quality, distinguished easily and modernity.

Pharmacists gave the same results except for 'distinguished easily', where tablets were ranked first and hard liquid capsules were ranked third.

80.6% of patients said that they would be ready to pay more for hard liquid capsules if they needed to.

Another product containing both the garlic and the co-enzyme Q10 ingredients as found in Cardiosteroil® and in the same amounts was not found in the pharmacies visited.

Out of all the products found, both the garlic and Q10 tablets by Wassen® can be taken together to provide similar, but not identical, amounts of the individual ingredients and also show similar cost levels to the hard liquid capsules.

Advantage	Ranking		
	Patients	Pharmacists	Physicians
Fast Action	1st	1st	1st
Easy to Swallow	2nd	2nd	2nd
No Preservatives	3rd	6th	3rd
No Additives	10th	10th	8th
Ingredients Kept Fresh	7th	9th	10th
Better Shelf-Life	8th	7th	7th
Convenient to Use	5th	5th	5th
Mask Taste	4th	3rd	4th
Mask Odours	6th	4th	6th
Pure and Trans- parent Look	9th	8th	9th

Table 1 Ranking of advantages of hard liquid capsules by patients (N=212), pharmacists (N=154) and physicians (N=33)



Figure 1 Photograph of Cardiosteroil® Hard Liquid Capsules³

CONCLUSION

The overall perception of patients, pharmacists and physicians is very positive and thus, this dosage form could increase in popularity. Hard liquid capsules were found to be around the mid-price range compared with other products.

Acknowledgements Alta Care Laboratoires for providing dosage forms used in the study. References

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- 2. Cole ET. Liquid filled and sealed hard gelatin capsules. Capsugel Library, BAS 210, 2000
- 3. Altacare Laboratoires Product list [Internet] Available from https://www.altacare.com/products_mi.asp?ProductId=659 cited on 9 Sept 2014