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COMPARATIVE PHARMACEUTICAL EVALUATION OF THE TWO MARKETED BRAND OF VATI

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ABSTRACT

Vati, Gutika are ayurvedic tablets and Pills and it has been widely used in the Ayurvedic system of Medicine. If we observe Indian ayurvedic market then these formulations cover major part of Ayurvedic formulation and Indian Ayurvedic Medicine system is flooded with Vati and That is why It was Decided to compare two famous marketed brand of Vati was selected for comparative evaluation by subjecting these formulations for different Evaluations parameters like Weight Variation, friability, Thickness, Hardness and Disintegration time. The observation revealed that both the famous marketed formulation passed all the evaluation parameters but when the hardness was evaluated it was observed that one brand was remarkably harder than other one and the same Brand exhibited higher disintegration time also.

KEYWORDS: Vati, Hardness, Disintegration Time, Evaluation.

INTRODUCTION

During the past few decades, there has been a wave of increasing acceptance as well as interest in different natural therapy especially Ayurvedic Practices in developing and developed countries. {1} This could be the reason for the presence of different ayurvedic formulation in the present market of Ayurvedic formulations

In the Ayurvedic field of practice, though several types of formualtions are being used presently, in which Vati plays an important role in Ayurveda pharmaceutics owing to many advantages like easy administration, palatability, convenient form for dispensing and transportation.{2}

Ayurvedic medicines formulated in the form of tablets or pills are known as Vati and Gutika. These are made of one or more drugs of plant, animal or mineral .Some of them are polyhaerbal, some of them are polyherbo-mineral formulation, consists of number of ingredients including bhasmas and pisties. This formulation is official in the Ayurvedic Formulary of India, Part II and it is therapeutically useful in the treatment of different types of ailment and disorders, vertigo, heart weakness, high fever, convulsion, hysteria and mental weakness.{3}

Various synonyms of Vati described by Sarngadhara are, Vati, Modaka, Vatika, Guda, Varti, Gutika, Pindi, etc. Gutika: is a formulation which is made into circular shape mass dosage form, is called as Gutika. It is like pills in modern pharmaceutics. Vati is ayurvedic formulation made in the shape of flat circular mass, it is similar to tablet. Varti, If these tow formulations are modified in to into long oval solid shape form, then it is called as Varti. Vati are majorly divided in two types as per their preparation methods (i) Agnisadhya Vati and (ii) Anagnisadhya Vati. {4}

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EVALUATION OF TWO DIFFERENT MOST WIDELY USED MARKETED BRAND OF VATI

HARDNESS TEST

The hardness of the Vati is an important parameter as for as the bioavailability problem and dissolution release profiles of drug is concerned. Vati hardness is the force necessary to break Vati diametrically It is also known as tcrushing strength of Vati. To perform this test the Vati of both the brand are located between two anvils and force is applied to the anvils, and the strength required to break the noted. If the Vati is too hard, the disintegration time is long and cannot meet up.

WEIGHT VARIATION TEST

The weight variation test would be an exact method to determine drug content uniformity of drug distribution. In practice this test is performed by taking 20 vati, from a batch. 20 vati are weighed at a time and the average weight is calculated. Then the vati is weighed individually. The percentage deviation was determined by using the following formula. The percentage deviation can be determined by using the following formula.

$$Percent\ Deviation = \frac{Average\ weight - Individual\ weight}{Average\ Weight} X100$$

FRIABILITY TEST

It is a measures strength of the Vati. It is measured using Roche friability apparatus. The normal revolution of this friabilator is 25rpm. And the assembly was set to run for total four minutes The friability is determined using the following formula.

For ideal formulation the limit is between 0.5% to 1% only of their weight,

$$\text{Friability} = \frac{Initial\ weight - final\ weight}{Initial\ Weight} X100.$$

DISINTIGRATION

Disintegration is the state in which no residue of the Vati test is leftover on the screen of USP Disintegration apparatus, if a residue remains, it consists of disintegrated parts of Vati component parts. The fragmentation of a vati into small fragments or granules is called disintegration. The first step to form a solution of the drug is disintegration. The time taken for disintegration is determined by disintegrating apparatus. The machine is operated at 28-32 cycles/min through a distance of 50-60mm. Place 6 Vati in apparatus (i.e., in the six tubes of the disintegrating apparatus), add disc to each tube and operate the apparatus. At the end of the 15 minutes Vati should disintegrate, completely without leaving anyresidue in the basket within the specified time.

THICKNESS

The thickness of individual vati is measured with dial caliper gauge, which gives us information about the variation between the thickness of the Vati which should not be more than ±5% variation, Vati thickness should be within of a standard value. Any variation in thickness within a particular lot of Vati or between manufacturer's lots should not be clear to the unaided eye for consumer acceptance of the product.

RESULT AND DISCUSSION

Table 1.The Evaluation of the given vati brands

S.N	Brand Name	Weight Variation	Thickness (Mm)	Friability (%)
1	A	Passed	3.73mm	0.90%
2	B	Passed	5.28mm	0.94%

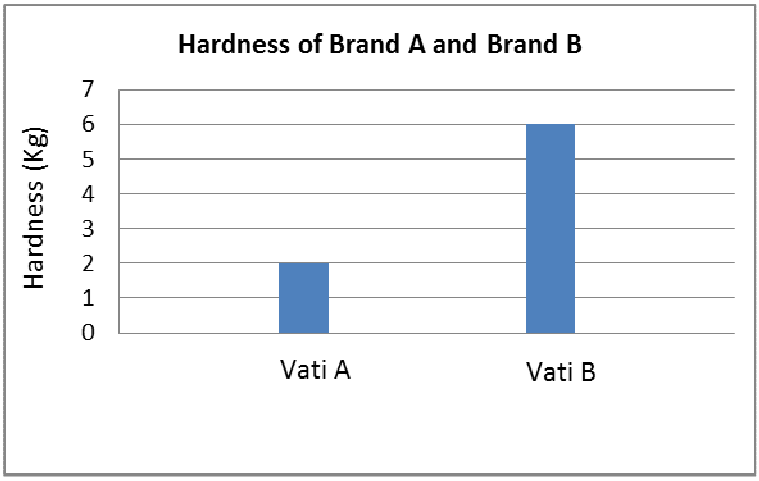

Figure 1.Hardness of Both Marketed Vati brand

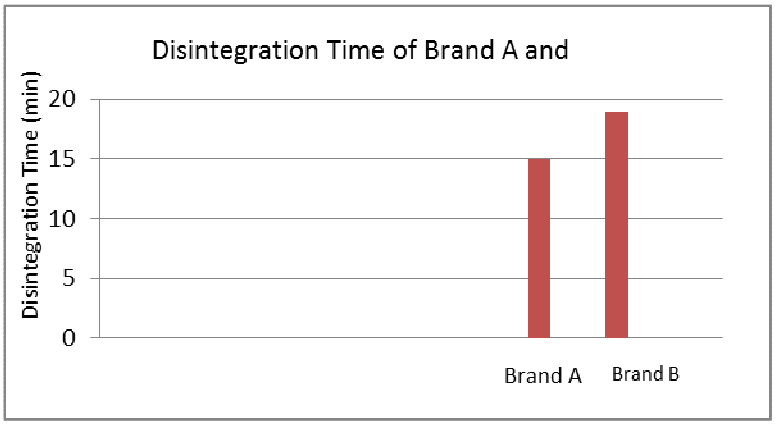

Figure 2.Disintegration time of Both Marketed Vati brand

RESULT AND DISCUSSION

After evaluating both the formulation A and B on following evaluation parameters Weight variation, thickness, Hardness, Friability and Disintegration time it was observed that Brand B showed higher limits of the passable evaluation parameters like in case of thickness which was more in case of Brand B Vati even hardness was also found to be higher than that of the Brand A Vati ,when its comes to the disintegration time evaluation of the both the formulation it was observed that the disintegration time of the Brand B Vati was higher than the Brand B , It can be easily interpreted that the formulation having higher hardness has higher disintegration time because the matrix formed is much more harder than the matrix formed after less force of compression, there might be one more reason for that, that is strength of the binding agent, It could also be higher concentration of Binding agents used in the Brand B Vati as compared to the Brand A Vati. This is the reason why the disintegration time of the Brand B Vati is higher than then Brand A vati .Though in the evaluation of both the two formulation it was observed that both the formulation passed the Evaluation parameters of the Vati, which shows that both the formulation are good formulation of Vati.

CONCLUSION

As Vati is also kind of the Tablet formulation and that is why all the test performed for the comparison of the pharmaceutical tablet related factors were similar to the tablet evaluation parameters. In the result it was observed that Brand B vati were more hard, more thick and there disintegration time was also found to be more that the Dabur Vati, Which reveals higher

strength. It can be concluded from above study that both the formulation were passed all the evaluation test and proved them self as best Vati formulation.

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