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**Understanding the technique and effect
of Kapalabhati as found in books
in Indian Languages other than Sanskrit**

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Understanding the technique and effect of Kapalabhati as found in books in Indian Languages other than Sanskrit*

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Abstract :

52 books in various Indian Languages (Bengali-1 Gujarathi 2, Hindi 24, Malyalam 7, Marathi 16, Tamil 2) other than Sanskrit were studied to get more details about the technique of KB which were not available in Sanskrit texts.

Eventhough some of the books have quoted Hathapradipika and Gheranda Samhita, they have added many more details in respect of meaning, position, technique, precautions & contraindications and effects of K.B. The nature of breathing advocated by Sanskrit texts is active rechaka-puraka in quick succession like a black smith's bellow. Apart from this technique some of these author have advocated second technique, i. e. active rechaka &

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passive puraka. However such technical details give much importance to the practitioner rather than to the technique. All these texts have failed to explain how KB acts as an accessory (karana) to pranayama & proper 'dose' to achieve desired effects.

1.0 Introduction :

Sanskrit literature lacks details of the technique of Kapalabhati (KB) becomes obvious from the review article of Desai and Bhole (1988). Observing the technique of Kapalabhati as followed in class-room gives rise to a number of questions as indicated below ;

1. What does the term Kapalabhati (KB) exactly mean ?
2. How does Kapalabhati act as a cleansing process and as an accessory (Karana) for Pranayama ?
3. Is there any particular body position essential for the practice of Kapalabhati ?
4. What are the essential and important features of the technique of Kapalabhati ?
5. What information is available about the practice of Kapalabhati ?
6. Is Kapalabhati viewed as something more than a cleansing process ?
7. What are the useful hints and precautions to be taken for the practice of Kapalabhati ?

8. When one should stop or reduce the practice of Kapalabhati ?
9. Under which conditions one should take medical advice and proper guidance for starting, stopping and continuing the practice of Kapalabhati ?
10. Under which conditions and for whom practice of Kapalabhati is contra-indicated ?
11. What is the expected out-come or effects of the practice of Kapalabhati technique and when one can expect to get them ?

1.2 Therefore, it was decided to study books in Indian languages other than Sanskrit to find answers to these questions. The results of this study is presented here.

2.0 Materials and Methods :

Easily available books in regional Indian languages dealing with hathayogic techniques were studied and scrutinized to seek answers in the above listed questions. Past students of the Institution were approached to send the details of the books and the technique of Kapalabhati available with them in different Indian languages for compilation and analytical study.

3.0 Observations and Comments :

3.1 Like Sanskrit, authoritative text books were not available in regional languages of India. Therefore, study had to be based on books of popular nature mostly used by the students and teachers as their guide books.

3.2 Out of 84 books referred for this purpose, 52 were found to deal with the topic of Kapalabhati. Language wise classification of these books is as follows :-

Bengali (B) = 1 : Gujarathi (G) = 2
Hindi (H) = 24 : Malyalam (Mal.) = 7
Marathi(M) = 16 : Tamil (T) = 2

3.3 Answers to various questions as found in these books along with the comments by the authors, if any, are given below :

3.3.1 Question one :-

What does the term. 'Kapalabhati' exactly mean ?

Findings :-

A. The term Kapalabhati is a combination of two words, i, e., Kapal+Bhati 1. The understanding of the term 'Kapal' is given as follows :

- a) Skull :- M9, H4, H16, H22b;
- b) Forehead : M8, H1, H10, H12;
- c) Head :- M3, H2.

2. All these authors have explained the term 'Bhati' as under :

- a) Shining,
- b) Glowing or
- c) Brightness.

All the other authors are silent on this issue.

- B. The term 'Kapalabhati' means, Frontal brain bellowing (Mal. 4)

Comments :

1. Sanskrit texts do not give meaning of the term Kapalabhati, while this meaning becomes available to us from these books.
2. The term 'Frontal brain bellowing' fails to give any clear cut idea or understanding.

3.3.2 Question two :

How does Kapalabhati acts as a cleansing process and as an Accessory (Karana) for Pranayama ?

Findings :-

A. Based on Ayurvedic concepts :

a) Kapalabhati removes :-

1. 'Doshas' (disorders) from the head (M3, H22b);
2. 'Kapha' from 'Kapal' and lungs (Mal. 2);
3. 'Kaphadosha' from the region above the neck (Mal. 7).

Comments :

One will be required to refer to Ayurvedic text for developing better understanding of these statements.

B. Based on the concepts of modern medicine :

Cleanses nasal cavities, air sinuses and respiratory pathways. (M3, M8, M12, Mal. 1)

C. Based on yogic Concepts :

Purifies and cleanses parts inside the head and leads them to brightness and glowing (M8, M12, Mal. 1).

Comments :

1. One cannot understand the exact implication of the terms 'purification' and 'cleansing' by reading these books. One will have to approach a living master or Ayurvedic texts where proper understanding of the concept of 'shodhan' i. e., purification could be developed.
2. One may be able to understand cleansing of the nose and respiratory pathways as used in daily life. However, purification of the parts inside the head or skull cannot be easily explained.
3. How Kapalabhati acts as a 'karana' i. e. an accessory for pranayama does not become clear from these statements.

3.3.3 Question Three :

"Is there any particular body position essential for the practice of Kapalabhati" ?

Findings :

A. Body positions (asanas) mentioned by different authors -

1. Padmasana - M3, M4, M5, M6, M8, M10, M11, M12, M13,

(7)

- M16b, H1, H3, H5, H10,
H11, H12, H13, H15, H16,
H18, H20, H22, B1, G2, T2,
Mal. 2, Mal, 7.
2. Sukhasana -- M6, M11, M12, M16b, H10,
H15, H16, H21, Mal. 7.
3. Siddhasana -- M4, M5b, M6, H1, H5, H6,
H12, H13, H16.
4. Swastikasana -- M4, M13, H4, H5, H20.
5. Any Meditative
Asana -- M3, M12, M13, H12, Mal.4.
6. Any desirable
Asana -- H6, H9, Mal. 2.
7. Vajrasana -- M8, M13.
8. Virasana -- H16
9. Samasana -- M3
10. Ardha-
Padmasana -- G1
11. Standing position with hands over the waist--
M8.

B. Arguments in favour of particular position of the body to be used for the practice of Kapalabhati.

1. M12 has advocates Padmasana on the plea that only this asana is capable of withstanding the vibrations produced during the practice of Kapalabhati.
2. M13 has stated that free movements of the abdominal wall are possible in sitting position in comparison to lying down or standing position of the body.

3. M8 recommends standing position, if one is unable to assume any of the sitting positions.

C. Details about the placement of hands and back :-

1. Firm and steady position of the body with straight back and hands kept over the knees. (M3, M4, M5, M6, M10, M16, H5, H10, H11, H12, H15, H20).
2. Erect back and hands firmly pressed over the knees (M8, H16, G1, T2, Mal. 4, Mal. 7).
3. Keeping a balanced condition of the body, neck and head (i. e., समं काय शिरो ग्रीवं) (M3, M12, H20).

Comments :-

1. Sanskrit texts do not give such definite instructions in respect of any particular asana or body position for the practice of Kapalabhati.
2. There is no unanimity about any particular position of the body to be used for the practice of Kapalabhati.
3. From the above findings, it becomes obvious that no particular asana is essential for the practice of Kapalabhati. However, any suitable and comfortable sitting position is advisable.

3.3.4 Question Four

What are the essential and important features of the technique of Kapalabhati ?

Findings :-

Technical details available from these books can be considered under the following heads :-

- A) Nature of breathing
- B) Abdominal Movement
- C) Movement of the Chest
- D) Use of Nostrils
- E) Production of sound or otherwise.

Details of informations collected under each heading has been summarised below :

A. Nature of Breathing :

1. Using the Yogic Term :

- a) Quick puraka and rechaka like black-smith's bellow, giving importance to lower abdomen. (H1, H3, H6, H7, H8, H9, H10, H17, H18, H21, H22, B1, G1, G2, Mal.2, Mal.5, Mal.6).
- b) Forceful active rechaka and passive puraka with abdominal muscles (M3, M5b, M10, M12, M13, M14, M15, M16, H12, H13, H15, H16, H23, Mal.4)

2. Using common terms

- a) Active exhalation in a jerky fashion with abdominal muscles alongwith the contraction of the anal area. (M12).
- b) Deep inhalation and quick exhalation (H2)
- c) Deep inhalation and deep exhalation (H5)
- d) Exhalation should be half of inhalation (e. g. inhalation for 2 secs. and exhalation for 1 sec.) (Mal. 1, Mal. 7).

Comments :

1. The authors of statement (1a) seem to represent the same idea as given in Sanskrit book. In addition, movement of the lower abdomen is mentioned.
2. All the other statements seem to have some deviations from the Sanskrit texts in one respect or the other.
3. Deep inhalation and deep exhalation mentioned in 2.b & c may not allow the practitioner to get an experience of the type of breathing as is mentioned in Sanskrit texts.
4. It seems that the terms inhalation and exhalation are used to represent puraka and rechaka respectively. Such an understanding may not prove to be correct.

B. Abdominal Movement

1. Use of abdominal muscles during puraka, rechaka (M3, 6, 5, 10, 13, 14, 15, 16; H12, 13, 15, 16, 23; Mal. 4.)
2. Use of lower abdomen during rechaka (exhalation) (H1, 3, 6, 7, 8, 9, 10, 17, 18, 20, 21, 22; B1, G1, 2; Mal. 2, 5, 6; M12)
3. During exhalation, throw the naval region against the backbone in an inwards and upwards direction by sudden contraction of the abdomen like a rubber wall rebounding from the floor. The navel region should, come back to the initial condition by relaxing the abdomen. During this time, inhalation will take place (T2).

Comments :-

The typical movement that takes place due to sudden contraction followed by equally efficient relaxation of the abdominal muscles as mentioned in 3 above is popularly understood as 'Kapalbhati Stroke'. Reference to this term is not found in Sanskrit literature.

C. Movement of the Chest :-

Only 13 authors have referred to the condition of the chest during the performance of Kapalbhati. Four different conditions have been mentioned as follows :

1. Chest should be kept steady (M3, 8, 10, 13; T2)
2. It should be fixed in an end inspiratory condition (M4, 11, 16b; H5, 12, 15).
3. It should be kept in normal condition without having any movement (T2)
4. It should be kept in contracted condition throughout the practice (M8).

Comments :-

1. Sanskrit texts do not mention about the position of the chest.
2. No unanimity is seen in respect of the position of the chest amongst the 13 authors who have made its reference.

D. Use of Nostrils :

1. Use both the nostrils (M2, 3, 4, 6, 7, 10; H2, 4, 5, 6, 7, 18; B1, G1, Mal, 1, 2, 5, 6)

2. Start with any one nostril and after sufficient practice switch over to both the nostrils (H10, Mal. 1).

3. Use one nostril for inhalation-exhalation and then change the nostril to repeat the same action.

(N. B. : This is not like in Loma-Viloma)
(M5a; H1, 10, 11, 16; Mal. 1, 2b).

4. After inhaling like blacksmith's bellow, through one nostril, forcefully and quickly exhale through the other like in Loma-Viloma (M1, H1, 3, 6b, 8, 9, 14, 19, 20, 21; Mal. 7).

Use thumb for closing the nostril (M1, H3, H21)

Use index finger for closing the nostril
(Mal. 1)

5. Close right nostril. Inhale and exhale through the left nostril speedily. Then inhale slowly through the left and exhale through right. Repeat the same act with the right nostril. Use both the nostrils to perform Kapalabhati after this (Mal. 2b).

Comments :

1. 39 authors have written about the use of the nostrils during the practice of Kapalabhati.

2. All sorts of permutations and combinations are found.

E. Production of sound or otherwise

Wide variations were found in respect of the production of sound. They are summarised below :

1. To produce :
 - a) sound like a blacksmith's bellow during rechaka; (M6)
 - b) frictional sound during rechaka (M8, H10).
 - c) Nasalised soo-soo sound during rechaka (H10)
 - d) Nasalised foo-foo sound during rechaka (H20)
 - e) smooth sound (Mal. 7).
2. Not to produce any sound (Mal. 1)
3. To feel the striking of air inside the nostrils and air-passage (Mal. 7).

Comments :-

1. Only 6 authors have suggested production of sound while one author has recommended noiseless performance of Kapalabhati. All others do not refer to this point.
2. As Kapalabhati technique involves action like the blacksmith's bellow, some kind of sound is expected to be produced during the process of rechaka. Even a frictional sound may be produced due to the air rushing out of the air passages.
3. No author has indicated the area from where the sound is expected to be produced e. g. glottis, nostrils or any other area.

3.3.5 Question five :-

What information is available about the practice of Kapalabhati ?

Findings :

1. Practice Kapalabhati strokes as per one's capacity (M1, 11, 15 ; H8)

2. To work with :

a. 15-20 strokes (M16b, H2, H11, H14)

b. 25 strokes (H3)

c. 4 to 5 strokes in the beginning. Increase them upto 15 to 20 strokes after 5 to 6 months and then upto 100 to 125 strokes after prolonged practice (M7, M16b)

Number of strokes should be increased gradually.

d. 50 to 60 strokes in one round (T1, Mal.4, Mal.7).

e. Begin with 20 strokes in one round followed by Shavasana for 30 secs (observe free flow of breathing) (T2).

3. a) Start with 10 strokes in one round in the morning and continue as follows :

First 8 days - 2 rounds

8 - 15 days - 4 rounds

15 - 22 days - 5 rounds

22 - 30 days - 6 rounds

30 days onwards- 6 to 22 rounds (M4; H5)

b) Start with 11 to 20 strokes followed by 4 to 5 deep breaths in one round and

such 3 rounds. Gradually increase the strokes upto 108 in one round (M10).

c) Start with 20 strokes per min. Increase up to 50 to 60 strokes per minute and then to 120 strokes per minute (H1, 5, 13; B1).

d) Begin with Kapalakhathi strokes as per capacity followed by natural breathing for some time in one round. Gradually increase the number of strokes to 21 in one round. Practice such 3 rounds at a time.

Afterwards either go on increasing the number of strokes in one round keeping the number of rounds constant, or go on increasing the number of rounds keeping the number of strokes constant.

Finally try to have 120 strokes in one minute in one round and such 3 rounds (M13).

c) Perform 20 strokes, when practised as a cleansing process; (M51), and one stroke per second when practised as a Pranayama (M 5b).

4. New Learner should begin with 30 strokes at the rate of 60 strokes/min. to be followed by rest for one min. Such three rounds. Gradually increase the speed to 120 strokes/min, as well as the time to one min. in one round.

For spiritual purpose, one round should be of three mins. duration (H12).

5. Ordinary practitioner should practice at the rate of one rechaka per sec. for one min; healthy practitioners should practice at the rate of 2 rechakas per second for one min., and old practitioners should practice maximum of 200 rechakas in one min. Such three rounds should be practised at a time (H 23).
6. Practice 21 strokes in one Pranayama and such 5 pranayamas in the beginning. Add one pranayama per week and increase upto 21 pranayamas (H 7).

Comments :-

1. Sanskrit texts mention about the particular nature of rechaka-puraka as the technique of Kapalabhati and they do not refer to the number of the strokes, rate or speed at which the strokes are to be delivered, duration of delivering the strokes and number of rounds or cycles.

The books under present study have given various details in respect of these parameters. However, no unanimity is observed amongst different authors.

2. Some authors have referred to the number of the strokes only (e. g. 1 & 2 and 6 above). Some have mentioned about the number of strokes and rounds, but are silent about the speed (e. g. 3a, b, c, d, e). All the four aspects of the practice have been described by H12 and H23 as mentioned 4 & 5.

3. M5 referred in 3c has differentiated between the practice of Kapalabhati as a cleansing process and as a pranayama.
4. H12 has given different time units for spiritual and non-spiritual practitioners of Kapalabhati.

3.3.6 Question six :-

“Is Kapalabhati viewed as something more than a cleansing process ?”

Findings :-

During this review, it was observed that 21 authors have tried to present Kapalabhati as a pranayama or similar to pranayama, even though the classical Sanskrit texts describe it as a cleansing process. Their statements and nature of instructions to that effect are summarised below :-

A. Kapalabhati as Pranayama or similar to Pranayama in effect.

1. The term ‘Kapalabhati pranayama’ has been used by M 4, 5b, 14, 16b; H2, 4, 6a, 13, 16, 22 ; and Mal. 4.
2. ‘Kapalabhati is a milder form of Bhastrika’ has been mentioned in M 9, 15 and Mal. 2.
3. ‘Kapalabhati pranayama is similar to Bhastrika Pranayama (M1, H3, 7, 20).
4. ‘Kapalabhati is pranayama without Kumbhaka’ (M5b), M14, M16b, H6b, H21, M22, G2).
5. Most of the authors have contributed to the view that Kapalabhati as a cleansing

process, also has an action similar to pranayama without kumbhaka.

B. Nature of Instruction for Practicing Kapalabhati as a Pranayama.

1. 'Kapalabhati as a pranayama without Kumbhaka'. After one round of Kapalabhati take a long breath in and exhale for double the time (M 5b, 14, 16b,; H6b. 21, 22; G2; Mal. 4).

2. 'Kapalabhati as a pranayama with antar kumbhaka' :

a) Have a momentary (निमिषमात्र) Kumbhaka after each rechaka (M9, 15).

b) Perform kumbhaka after 10 expulsions by closing the nostrils (M4; H15; H18).

c) Perform kumbhaka as long as possible after inhalation.

d) Perform kumbhaka along with Jalandhara bandha after closing the nostrils (H 7).

e) Have breath holding (kumbhaka) for $1/2$ the time than your actual breath holding capacity (H2).

f) Perform kumbhaka after 10 expulsions by closing the nostrils along with three bandhas following 4 : 16 : 8 ratio for puraka-kumbhaka-rechaka.

3. 'Kapalabhati as a pranayama with bahya kumbhaka'. Apply three bandhas after finishing Kapalabhati strokes (M10 & H13).

4. 'Kapalabhati as a Pranayama with antar and bahya kumbhaka'. First, practice Bahyakumbhaka as per one's capacity after practising 50 expulsion. They practice antarkumbhaka (for 5-10 secs. comfortably) after puraka and then proceed to another round of 50 expulsion (H10).

Comments :

Describing Kapalabhati as pranayama or similar to pranayama is a new dimension of understanding Kapalabhati. This view point is not available in Sanskrit texts.

3.3.7 Question Seven :

What are the useful hints and precautions for the practice of Kapalabhati :

Findings :

A. As a preparation for Kapalabhati :

- 1) Jalaneti and Sutraneti (M8, 10, 16b,; H3, 24).
- 2) Three Uddiyanas after Jalaneti (M10, H24).
- 3) Continuous practice of asana and breathing exercises for 2 months (Mal. 7).

B. For actual practice of Kapalabhati

- 1) Rate of breathing should not be increased in the beginning before establishing proper association between the activity of the abdominal muscles and respiration i. e. the 'stroke' (M10, 11; H15).

- 2) Strokes of Kapalabhati should be delivered below the umbilicus (hypogastric region) (M10, H12).
- 3) Rate and rhythm of the strokes should be increased gradually as per the capacity of the practitioner (M4, 7, 12; H5, H6a, 10, 19; B1; T1).
- 4) Duration of Kapalabhati should be fixed according to one's age, capacity and season (M4; H5).
- 5) Eyes should be kept closed throughout the practice (M4, 8; H1).
- 6) Rechaka should not become shallow (M12) and it should not be injurious to any part inside the body (H5).
- 7) Contraction of the muscles of the nose, eyebrows, throat and vocal cords should be avoided (M8, H12).
- 8) Body should be bent forwards during exhalation and backward during inhalation. The trunk, neck, head should be kept steady (M8).
- 9) Kapalabhati should be practised :
 - a) on empty stomach (M10, M12, Mal.7)
 - b) after taking bath (H5) and after breathing becomes quiet (H13).
- 10) Anal muscles should be contracted with proper understanding and awareness (M8).
- 11) Nostrils and air passages should be kept open during the practice (M13, T2).

12) Uniform gap should be kept between two breaths (F1).

13) Practice Kapalabhati regularly if one has excess fat (H20).

14) Eat rice with green grams (Khichadi) or rice with milk to have the desired effect (H22a).

15) Practice Kapalabhati before starting pranayama as a sadhana.

3.3.8 Question Eight

“When one should stop or reduce the practice of Kapalabhati ?”

Findings :

1. One should stop or reduce the practice of Kapalabhati if one experiences :
 - dryness in mouth and nose (M7)
 - irritation in bronchial tree, throat and nose (M8, M12)
 - bleeding from the nose (M15, 16)
 - cold and blocking sensation in nose (M8)
 - hammering sensation inside the head (M35)
 - giddiness and heaviness in head (M8, 12)
 - irregularity in breathing movements i. e. non-rhythmic and change in sound (M7, S)
 - If Vata, Pitta and Kapha are in balanced condition in the body (GI.)
2. Stop the practice completely if the same experiences recur after resuming the practice and if the irritation and pain persists (M15).

Comments :

Sanskrit texts have not given such hints. Above listed hints are beneficial for the practitioners to avoid damage to their systems.

3.3.9 Question Nine :

“Under which conditions one should take medical advice and proper guidance for starting, stopping and continuing the practice of Kapalabhati” ?

Finding :

One should take medical advice and proper guidance for starting and continuing the practice of Kapalabhati, if one has :

- a) weak body (M3)
- b) weak diaphragm and lower abdominal muscles (M12)
- c) deviated septum or polyp in the nose (M8)
- d) severe anaemia (M10, Mal. 1, 7).
- e) insomnia (M16, Mal. 1, 7)
- f) diseases of lungs and heart (M12, 13)
- g) asthma and other respiratory disorders (H23)

Comments :

- 1) Sanskrit texts do not give such instructions.
- 2) Even though one may have above listed conditions, one could still practice Kapalabhati under proper guidance.

3.3.10 Question Ten :

“Under which conditions and for whom practice of Kapalabhati is contraindicated ? ”

Findings :

If one has :

- a) weak body and weak lungs (M15; H10, 20).
- b) high temperature (H22a)
- c) severe chest pain (Mal. 1, Mal. 7)
- d) disturbed state of mind (H 22a)
- e) high and low blood pressure (M15, H16)
- f) exhaling with undue force (H12)
- g) No necessity for Kapalabhati (H 22a)
- h) diseases of : ear and eyes (M15, H16, Mal. 1, Mal. 7); lungs (M12, M15, 16, H22, Mal. 7); pleurisy (Mal.7); hyperacidity and pittavikara (H 18, H 22a); insufficiency or weakness of heart (M12, 15, 16a, H18, 22, Mal. 7); and jaundice (M 16 16a, H18).

2. Under following conditions :

- a) travelling (H 18, H 22a)
- b) rains (H18, H 22a)
- d) cold waves (H 18, H 22a)

3. For ladies (M15)

Comments :

Sanskrit texts do not mention about any contraindications for Kapalabhati. However, above referred statements assume importance for the consideration of Kapalabhati.

3.3.11 Question Eleven :

“What is the expected out-come or effects of the practice of Kapalabhati technique and when one can expect to get them ? ”

Findings :

Effects of Kapalabhati can be considered under the following heads :

- A) Yogic importance
- B) Physiological importance
- C) Psychological importance
- D) Therapeutic importance
- E) General importance

A. Yogic Importance :

1. Brings shining and brightness on and to the forehead (M8, 16b).
2. Cleanses and purifies the nadis (M1, 4, 12, 16b H4, 5).
3. Stimulates nadis and Chakras and helps in meditation (mal. 2)
4. Helps to get control over pranic activity (M10).
5. Helps to get control over indriyas (M16a).
6. Helps to dry the nose after Jalaneti (M1, 9, H3, 10, T1).
7. Helps prana to enter and flows inside the Sushumna (H18, 22a, G1, Mal. 2).
8. Prepares for antara kumbhaka and bahya kumbhaka (H10) and increases duration of antara kumbhaka (M 7).
9. helps to have rhythmic and deep puraka-rechaka in pranayama (M 10, H10)
10. Awakens kundalini (M10, 13, H6, 7, 9, Mal. 2).

B. Of Physiological Importance :

1. Brings coolness in eyes (M9).
2. Knowledge about good and bad smells (M4, H5).
3. Increases breathing capacity (M11, 13).
4. Calms down the respiratory centre in the brain (M3, 6, 13).
5. Stimulates brain and improves its efficiency (M 13, 15).
6. Cleanses frontal brain (Mal. 4).
7. Strengthens the diaphragm and the heart (M8, 10, 11, 13, B1).
8. eliminates more CO₂ and absorbs more O₂ in the blood (M12, 13, G2, T1, Mal. 2).
9. Increases gastric fire (H7); improves digestive capacity (H3, H6, H10, G2).
10. Strengthens and tones up the pancreas, spleen, liver, abdominal muscles due to massage like action (M3, 6, 8, 9, 12, Mal. 2, 7).
11. Purifies and activates the lungs which in turn helps to keep away from infections like tuberculosis away (H1, 6, G2, Mal. 7)
12. Enables to get sound and deep sleep and helps to achieve full benefits of rest (M8).

C) Of Psychological Importance :

1. Helps to remove :
 - a. worries (Mal. 4).
 - b. loss of memory (Mal. 7).
 - c. restlessness (M4, H5).

2. helps people who have more mental work (M12).
3. enables a person to feel light, flexible and enthusiastic (M7, T2),
4. gives calmness to head (M4, H5).
5. stabilizes and calms down the mind (M4, 7, 16a, H5, 10, Mal. 4)
6. helps in achieving confidence (M8).

D) Of Therapeutic Importance :

i) Removes :

- a. headache, heaviness in head and giddiness (H2, Mal. 7).
- b. cough, cold, rhinitis, sinusitis, pharyngitis (M8, 11, 12, 16, H2, 10, 12, 14, 15, H18, 22a, B1).
- c. diseases of throat (Mal. 1)
- d. controls asthma, bronchial spasm and other disorders (M8, 12, 14, H1, 10, 18, 21, G2, T1).
- e. indigestion, loss of appetite, gases, acidity, constipation, worms (M8, 16, b, H17, 18, H20, 22a, 23, B1).
- f. disorders of phlegm and imbalances of three doshas, (M1, 4, 5a, H1, 3, 5, 6, 7, 8, 9, 11, 17, 18, 21, 22a, 23, B1, G1, 2, T1, Mal. 4, 5, 6).
- g. excess fat (M6, 8, H6b, 20).

h. blood diseases; low blood pressure (H2, 22, 23).

i. enables to stop hysterical fits (H2).

E) Of General Importance :

1. helps in increasing enthusiasm and reduces lethargy (H10)
2. Help singers, lawyers, teachers and orators to speak long and continuous sentences (M5b, 8, 13).
3. Helps swimmers, runners and players to develop skills and natural activity (M 5b, 8).

Comments :

1. Sanskrit texts, Hatha Pradipika, Gheranda Samhita and Yoga Chintamani mainly refer to two effects of Kapalabhati, i. e. 'Kapalabhati and Removal of phlegm and diseases related to it. Removal of all diseases have been mentioned in Hatha Ratnavali. The authors of various books under study have added number of effects which are directly or indirectly related to the practice of Kapalabhati. However, they are silent about the 'dose' that will be required for achieving the desired effects.

4 : Discussions and Conclusions :

1. Ten authors have quoted Hathapradipika (M2, 3, 6, 12, M13, ; H3, 6a, 23, Mal. 6, 7); and seven authors of various books under study have added number of effects which are directly or indirectly related to the practice of Kapalabhati. However, they are silent about the 'does' that will be required for achieving the desired effects.

4.0 Discussions and Conclusions :

1. Ten authors have quoted Hathapradipika (M2, 3, 6, 12, M13, ; H3, 6a, 23, Mal. 6, 7); and seven author have quoted Gheranda Samhita (M10, 12, 13, H6a, 23, 24) as their source books. While quoting these Sanskrit texts, the authors have added many things of their own in respect of meaning, position, technical details, hints, precautions, contra-indications and effect of Kapalabhati. Vishwas Mandlik (M13) has quoted and compared both the texts and has opined that the technique of Hathapradipika is more clear, adequate and suitable for practice than the one given in Gheranda Samhita.

2. When the Sanskrit term Kapalabhati indicates 'Shining of Kapal' (i. e. head, forehead, skull, brain etc.), these authors have emphasised the cleansing of the bronchial tree (respiratory passages) along with the 'Kapal' while describing the meaning and understanding of the term 'Kapalabhati'.

3. Sanskrit texts have described Kapalabhati as an accessory of pranayama, while some of the books under study have described it as a pranayama.

4. Sanskrit texts have mentioned both rechaka and puraka as active phases in Kapalabhati. In the present study two views seems to emerge. One view agrees with the sanskrit texts, while the other view, active rechaka and passive puraka. No explanation is available for this deviation.

3. Through this presentation the most common points about Kapalabhati technique appear to be :-

- i) **Body position** :- Any comfortable sitting position with straight spine and hands put over the knees;

- ii) **Essential technique of Kapalabhati :-** Rapid breathing movements employed with the help of the abdominal muscles.
- iii) **Effect of this particular technique :-** Cleansing of the respiratory pathway (bronchial tree) and air sinuses in the skull.

6. Much light has been thrown on the technical details of Kapalabhati through the above listed questions and answers. However, one does not know about the proper 'does' and duration of Kapalabhati required for achieving the desired results i. e. shining of the skull or forehead as communicated by the term Kapal + Bhati. It still remains obscured and un-explained. So it is desired to extend the present work to the study of literature in other languages.

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1984, 68-70 p.
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Steam Press. 1905, 434 p.
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New Delhi, Bharat Sevak Samaj, 40-41 p.
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Shri Bharat Dharma Maha Mandal, Jagatganja,
1921, 14-15 p.
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- M 16 - Yogacharya K. B. Sahasrabuddhe, **Shastriya Yogabhyasa**, Bombay : Choufer Prakashan, Turbhe, 1987, 29-30 p. and 82 p.

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- 3) Gheranda, **Gheranda Samhita**, Lonavla : Kaivalyadhama S. M. Y. M. Samiti, 1970, (I : 54).
-) Shivananda, **Yoga Citamani**, MSS 1931, Part I, 97 p.